

Termanites Invade New York! SEE PAGE 8

Fantastic

ADVENTURES

FEBRUARY
28c

SEE
BACK
COVER

The **PRINCE OF MARS RETURNS**

By **PHIL NOWLAN**
AUTHOR OF BUCK ROGERS



GREAT
STORIES BY

ROBERT MOORE
WILLIAMS



THORNTON
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start
gargling
with
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Mister!**



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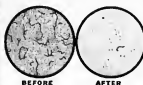
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Fantastic

ADVENTURES

VOLUME 2
NUMBER 2
FEBRUARY
1940

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Jalu, the Golden Girl of Kalandar, returns once more in Orlin Tremaine's newest story, in the March issue.



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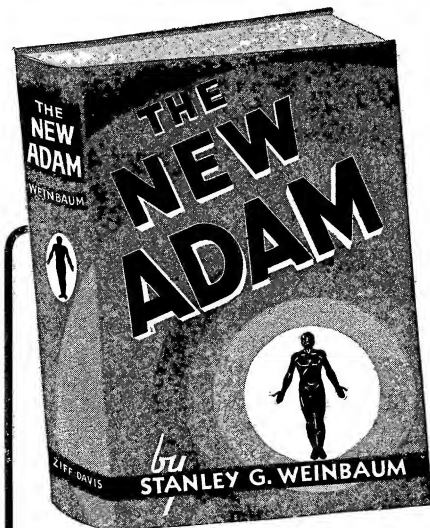
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Front cover painting by Robert Fugue depicting a scene from *The Prince of Mars Returns*
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The Editor's Notebook

A CONFIDENTIAL CHAT WITH THE EDITOR

WITH this issue of FANTASTIC ADVENTURES, the second of our monthly issues, we inaugurate the first of our two part novels. We are leading off with the famous Phil Nowlan's "The Prince Of Mars Returns."

Phil Nowlan began his career in science fiction in the early AMAZING STORIES. He wrote "Armageddon" and "The Airlords of Han," the first stories in which the now almost legendary character, Buck Rogers, made his debut. Both stories were extremely well received, and it wasn't long before the hero of the twenty-fifth was on his way toward that coveted position, public popularity. Today, Buck Rogers is on the air, in the movies, in the comics, and his rocket ships and ray guns grace every department store stock in the country.

Now, in FANTASTIC ADVENTURES, we present the newest, and perhaps the best, of Phil Nowlan's stories. It's not about Buck Rogers, nor is it about the twenty-fifth century. It's about Dan Hanley, and his adventures on Mars. A romantic, swashbuckling story, packed with all the romance of a Burroughs, the atmosphere of a Merritt epic, and the plain, honest-to-goodness smash action of Phil Nowlan, the action man of science fiction. We guarantee you'll like this new yarn by a name you'll never be able to forget, because the youth of America, or the world, will never let you forget. We give you, because we know you'll like him, the Phil Nowlan of 1927!

ONCE in a while a story comes along that is laid right in our back yard, or should we say our front yard? Because this particular yarn is laid in New York, or more properly, under New York. It's authored by Bertrand L. Shurtieff, who knows how to build suspense, and weave a net of terror.

When you read "New York Fights The Termites" in this issue, you'll find yourself sitting on the edge of your chair, and casting covert glances at the window. And we wouldn't be surprised if you saw something moving out there . . .

A FEW issues back, Nelson S. Bond gave us a humor yarn, laid in space, about a character named Lancelot Biggs. Well, he's back again, and this time you'll really be fascinated by this timid little spaceman, and his wild theories. He's a cook on this trip, and can he sling a mean cooking pot! We'll say! Don't fail to read about it. It's page 40, if you think we don't mean it! A sequel to F.O.B. Venus.

DON WILCOX dropped in the office the other day, and was in quite a stew about Dictators. Now don't begin to sputter—we know everyone's getting sick of the eternal dictator. That's just why Don talked over the plot for "Let War Gods Clash!" with your editors. He decided science fiction ought to do something about it. And his idea was one we liked a lot. "Why not," says he, "get these dictators together and let 'em battle it out personally, instead of killing off a lot of innocent people, wrecking a lot of valuable property, just to further their insane ambitions?"

"Good idea," responded your editors. "How about doing it?" And so, it's in this issue. And we hope that settles the dictators for awhile. It's a neat story, too.

NEW reports come through on the latest advance in science, the suspended animation theme of science fiction. The frozen sleep, as it is called, has already been used in the treatment of cancer, and marked success has been achieved. Now, a new use for the frozen sleep has been discovered. Victims of narcotics and drugs are completely cured by a five day "sleep," and suffer no ill effects. For a period of five days, these unfortunates go through a dreamless, suspended animation, and awaken freed of a habit it would take infinite torture to discard by the usual means. Nor is there any desire to return to it.

THIS month FANTASTIC ADVENTURES' two new sister magazines, SOUTH SEA STORIES and AIR ADVENTURES hit the stands with their second issues. You'll find our old friend Orlin Tremaine, of "The Golden Girl of Kalendar" fame, and David Wright O'Brien, who wrote some science fiction recently, in SOUTH SEA STORIES, and we advise that you glance through both books for some fine entertainment, right smack in the adventure field.



"You're absolutely right, Snodgrass. It's a woman all right!"

INCIDENTALLY, this month's AMAZING STORIES has a swell bunch of things. It would pay you to go out and get a copy. Just as a hint of what you'll find in its pages, there's another (and the best) Adam Link story. The human robot really scores in this one with the most dramatic, tender human nature story Eando Binder has ever written. And Robert Moore Williams gives us a story about today's war that will thrill you. Remember the big mystery explosion at Friedrichshafen? Well, you'll wonder more about that when you read "Rockets Over Europe." Maybe science fiction has come true, after all. Read it and decide for yourself.

HERE'S one for the science fiction author's books. In a remarkable operation performed recently, a helpless epileptic was completely cured of his affliction by the removal of a portion of his brain! That was odd enough in itself, but it's what happened later that is really fantastic.

Rather than becoming, to speak slangily, a "lame-brain," the patient showed a paradoxical increase in intelligence.

The man was a farmer, and bad fractured his skull ten years before. Delicate brain tissue was damaged, and he suffered violent epileptic attacks. His IQ, or intelligence quotient, was 83. After losing more than a tenth of his brain, his IQ hit a high of 98!

The explanation offered is that with the damaged tissue cut out, the brain was like an auto engine that runs better with a spark plug completely removed than with one badly connected and firing at the wrong time!

The disconcerting thing, however, is that the frontal lobes of the brain are supposed to be the seat of the higher mental functions, and in this operation, a full third of those portions were taken away! Does this mean that the IQ test does not measure present ability to learn, but the result of past training?

WITH that we write finis to another chapter of the Editor's Notebook. We'll be back next month with more jottings. **Rep**

NEW YORK FIGHTS

BY BERTRAND L. SHURTLEFF

HELLO—hello—Tony! Hey, Tony! Do you hear me? What's wrong down there?"

Jerry Edwards, barking into the phone, watched the pressure gauge on which the lives of some thirty men depended, pressed by a weird premonition of trouble down in the new subway.

He felt now as he had that day on the river job when Big Mike Hennessey was blown clear into the pathway of a tug and half the Hudson came into the job, drowning seven of the boys before they could get to safety. There was no explaining how a man knew it, nor what it was that warned him, but there was unmistakably trouble brewing.

Even as he called anxiously, the needle leaped. No slow descent such as came from a small vent. No vacillating decline that might mean a leaky packing in a pump. Just one wild jerk that sent her clear to the peg and hung her there without a single tremor of life, as if the top had blown off the job.

"What'n hell can that mean?" he gasped. "Hello—hello—Tony! Tony! You there, Tony?"

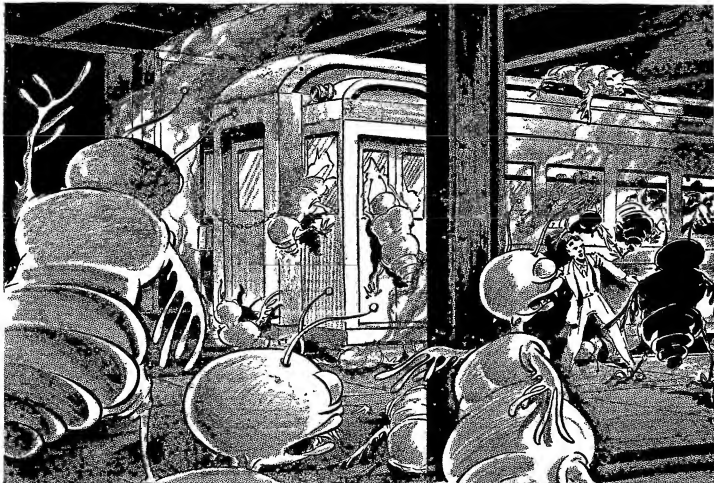
There was no answer but the groaning moan of a body trying to suck air into tortured lungs. His face bloodless, he reached for the other phone that was constantly connected with the air lock.

"Hello, the lock. Anybody there? Any of you hogs make it?"

He was holding both receivers to his ear and shaking in spite of himself. Accidents like this sometimes ruined the careers of men who watched the gauges. Once the rumor got about that if any engineer was unlucky the hogs would refuse to work under him.

That sudden gasp, announcing that somebody was trying to reach him, might be over either line. Then the voice came, gasping and weak, but recognizable. Instantly his pulses steadied. The wild panic left him. It was Tony Lukowitz, foreman on the job, talking from beyond the lock.

"Jerry—it's me—Tony. She jus' blew. Lights too. Knew you'd worry, so made the phone first. Queer thing. Big hole just ahead. Got my flash on it, but can't make it out."



IN AN INSTANT THE SUBWAY WAS A BEDLAM OF TERROR AS THE GHASTLY WHITE CREATURES ADVANCED.

THE TERMANITES

"Yeah, Tony, but how'd she blow? You don't mean we pushed that ledge up and blew the top off a hundred foot hill? We wasn't carryin' enough for that."

"I'll give a look. Too sick to talk much. Boys in bad shape. Try to herd 'em—into lock. Let her down. We got nothin' here."

Jerry knew that, for the needle hadn't moved off the peg. The pumps were ramming air down there just as fast as they could, and that hole was sucking it up without filling. Never before had he encountered anything like this.

Minutes were precious, he knew. Men who had been working under such conditions must not stay long as they were. Like divers who have been deep under the surface of the ocean, they were in danger of the dread nitrogen bubbles in the blood that men call the "bends" unless they could be hurried into that lock and put back under a similar pressure which could be released slowly. That lock must serve now as the diver's decompression chamber.

How could New York stop these awful monsters from underground? They swarmed up like ants in an endless stream of death.

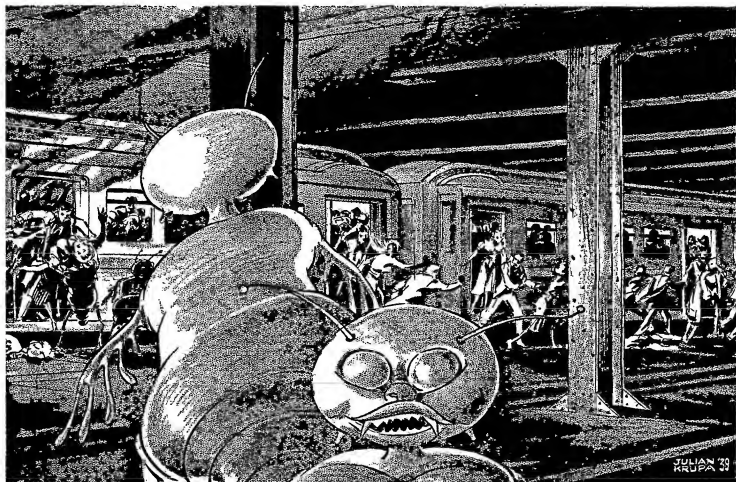
EVEN above the hiss of escaping air as he let off the lock, he heard that scream from the phone. It was like nothing he had ever heard before.

Piercing, shrill, filled with an unutterable horror, that cry rang from the receiver, more horrible still because it came from those hard-bitten sand bogs who knew how to die.

"What is it?" he screamed, half hysterical with dread.

There was no answer save a repetition of that scream, seemingly a mingled cry now of many voices. Then he heard Tony's voice, but more hysterical than he had ever heard it before.

"Hit it, Joe. Smack the blood sucker. Kill it, for



NEW YORK WAS BEING INVADIED FROM BELOW BY THE MOST HORRIBLE CREATURES OF A NIGHTMARE

God's sake, before it gets all of us!"

"Tony, what is it? Are you all goin' crazy down there?"

The foreman's voice was subdued, shaken as he jerked out a reply. "I think so, Jerry. Maybe it's the sudden drop. Guess we're seein' things that ain't. Got that lock pulled? I'm shovin' the boys in—what's left of them."

"Okay, she's down." Then he caught the significance of those last words on the rebound. "God, Tony, how many?"

"I can't say. Busted my flash. That-damned thing knocked it out of my hand just before— Hey, damn you, let go my leg! Stop it, I say. Keep your shirt on, boys. Nothin' to go panicky about. You're cold as hell. Stop draggin' at me, I'm phonin' top side. I gotta— Let go, damn you, you cold fish. I'm—"

The words choked off as if the foreman gasped for air. Then there came the thud of the falling phone and silence.

Again Jerry Edwards shook like a leaf as he jiggled first one hook and then the other without a sound of life from either. Ghostly green under his tap, he faced the super.

"I'm jumpin' down there," he called. "Something queer's happenin'. Stand by the phones. I'll want air into that lock in a hurry when I call for it. We'll lose the lot of 'em if we don't get 'em under pressure soon."

Even as he raced down into the tunnel he wondered if the men had all cracked simultaneously. Probably they had struck an old fissure in the rock, where some gases lay imprisoned, gases that had overcome them, set them to dreaming or fighting among themselves. It wouldn't take much to set men panicky when pressure dropped so suddenly.

He felt of his own pocket to make sure his flashlight was in readiness. It was no joke poking around a job without light. Probably a fuse had blown when the wall ahead fell, or somebody might have jerked over the switch by accident. There was no knowing what a man would do when terror hit him.

The lock doors yielded. He saw that a feeble electric light was still burning above those benches where the sand hogs sat while the pressure was being adjusted to let them in or out. But the benches were empty. There was not a slumped form on the floor, fallen in an effort to reach the chamber that might mean life.

The door to the job had been swung open. He shot his beam through it, then blinked at the ghostly sight that he beheld.

SOMETHING almost human in size and shape, yet horribly inhuman in other respects, was dragging at the limp body of one of the sand hogs. Naked, its ghostly white body gleaming with a mildly phosphorescent glow, the thing that looked oddly human, yet oddly like a massive ant, was tugging and jerking with more than one pair of arms, while its head, seem-

ingly without developed eyes, was swinging out from side to side, waving antennae that quivered and jerked.

The thing lifted the body easily, swung it over its back, and went off toward the far end of the tunnel, walking very much like a man bent over at the hips under a load, but balancing itself by the use of other minor limbs than the two or more that supported the limp form.

Jerry Edwards screamed and leaped after the thing, picking up a bar and preparing to drive it into the phosphorescent whiteness of flesh. But just as he started that lunge of the bar, his flashlight revealed the gaping hole in the end of the tunnel, a hole twenty feet across and lined all the way with similar sightless heads, waving antennae, and reaching arms.

At the same instant they came lunging up, darting from side to side with the queer quick jerking movements of exploring ants, making way for their burdened fellow who jostled past them and down the gaping hole, still carrying his burden.

Edwards saw in that one swift sweep of his arc that the job was empty of anything living but those unnamed creatures that seemed to keep spewing up from subterranean depths. Combat was useless against such numbers, pursuit of the one carrying the dead or unconscious sand hog ridiculously foolhardy. There was nothing that he could do but retreat.

That, he realized, must be done quickly. The foremost of the advancing horrors had halted at a few drops of blood, presumably where somebody had bled at the nose at the sudden drop of pressure. But the others pushed him on, their antennae waving jerkily, to point in the direction of the staring Edwards.

As they swept at him with incredible swiftness, considering their evident blindness, he came out of his physical trance, rushed through the door, and clamped it shut after him.

The phone was jangling, but he had no stomach for trying to tell the super over the phone what he had seen. That sort of thing wouldn't sound credible face to face, let alone over a wire.

Shaking with horror he went fumbling upward. He could only guess at the death the boys had met down there in the gloom. If any of them had still lived when carried off into the cavern beyond, he must die soon of the bends.

THE super stared at him incredulously and started for the ladder. Edwards gripped him.

"They're shut out of the lock," he said. "Don't let 'em through, whatever you do. Don't go down there without a gun. They're devilish."

The super jerked out an automatic.

"Been carryin' this ever since that Polish guy ran amuck. Guess this'll stop 'em."

Edwards seized an axe and followed at his heels. He had closed the doors at both ends of the lock to make sure those things didn't come through. There was going to be work enough to do without having

those horrors swarming over the completed part of the tunnel.

The super jerked off the clamps and yanked open the door. He thrust his head in, preparing to follow, but halted instead and lifted his automatic with frenzied speed. With a roar that all but deafened them in the confined space, he poured four or five shots into the dimly lighted chamber where those vaguely discernible forms were groping over benches and floor.

Edwards saw to his horror that the wood about the farther door was eaten away as if by powerful teeth or a biting acid, so that the hinges had allowed the door to drop. Inside the lock was a veritable swarm of the things, their shining bodies tight packed.

There were quick jerks of pain as the bullets smacked home, but the survivors merely lifted their head out of the way and bore them to the rear, or came swarming over them. By the time the fourth or fifth shot was fired, an arm-like limb had reached out and seized the wrist holding the gun. Another wrapped around the super's neck, jerking it horribly. Edwards knew by the crunching of bones and the sudden limpness of the form that the super was killed instantly, his neck broken.

Again he turned and fled, conscious that those darting, questing forms were flooding the finished portion of the tunnel behind him, feeling, sniffing, jerking, searching, as if eager for more and more human bodies to bear off to their unknown caverns.

Weak and sick, he made the surface, staggered to the phone.

"Police headquarters," he managed to gasp, "quick. Emergency!"

In the awful interim while he waited, he could not take his eyes from that ladder he had just ascended. They might come swarming up that at any instant, rushing about like a nest of enraged ants, killing savagely, bearing off their victims.

"Subway construction job number seventeen," he yelled. "Rush as many riot squads as you can over here. Hell's broke loose. Gas. Machine guns. Anything you've got that'll kill. For God's sake hurry!"

There was no use trying to hold them what had happened. They would know he was a mad man if he tried to explain those ghastly things that had taken over the tunnel.

Sirens screamed. Squad cars began to rip tires to a quick halt about the job. Officers came running with machine guns in their hands.

"What's up?" called a captain. "Labor troubles? We're not turnin' machine guns on strikers."

"Nobody's askin' you to," snapped Edwards, his nerves so raw that manners were forgotten. "Take a look down that hole at the murderin' things that just rushed our job. You'll be glad to turn your guns on 'em, if you see what I did."

through the hole and was waving those odd antennae. In the light of day it was easy to see that the head carried sightless, undeveloped eyes that looked as if they would never mature into usefulness. There was no nose. The mouth was a working set of mandibles that seemed to slide together like the shutter plates of a camera, hard body things that looked capable of tearing flesh horribly.

Even as they watched, arms appeared, long slender limbs of the same pale whiteness as the head and body. But there were no hands on the extremities, only suction disks that gripped eagerly at the rough planking.

"Shoot the devilish thing," screamed Edwards. "There's an army of 'em below. They've cleaned out thirty men. Broke the super's neck before my eyes."

The bald head, with the bluish bulges of the undeveloped eyes the only sign of color in the glowing whiteness, seemed to sense cause for alarm. With evidence of fear in its bearing, the creature jerked its suction hands loose with a squidgy tearing sound, partially whirled, almost like a man on a ladder, and began to descend.

To the horrified men the descent was even worse than the appearance, for it veered away from the ladder and walked down the concrete wall with those odd squidgy sounds of broken suction as each limb tore loose from the wall.

Other similar heads poked out, wavered, and retreated. But the hole was not deserted. More and more and more of the unnameable creatures came poking and sniffing up, to retreat in a similar fashion against and even over their jostling fellows who kept streaming up to the hole to discover for themselves what lay beyond.

Unable to comprehend why they were retreating, Edwards could only gasp feebly.

"Do something, Cap'n. Shoot 'em. Gas 'em. Drive 'em back somehow. They'll swarm down that tunnel. They'll be into the subway."

A commissioner forced his way through the awe-struck ring of numbed officers. His eyes bulged as he took one look at those ghastly white heads with their unborn eyes and their waving antennae.

"They've swarmed out of a cavern we struck," explained Edwards hurriedly. "They've killed and carried off thirty men and our super. Will you do something?"

"Got any gas, Captain Merkel?" asked the commissioner, his lips colorless and his face drained white.

"Plenty of it."

"Give 'em a taste."

The captain motioned. Gas throwers leaped to the shoulders of the two foremost men, shot the fumes down into that seething horde.

Above ground men gasped and choked in the mere whiffs that seeped up through the planking. Eyes began to water. Handkerchiefs mopped freely.

But there was no change evident within the tunnel below. The antennae waved a trifle more, perhaps, but the white forms showed no increased animation,

THERE was no need to go down. The leader of the weird creatures had already thrust his head

no faintest sign of excitement.

"Tear gas can't touch 'em because they've no eyes," called Edwards. "Give 'em the works. Something that'll kill. We'll be overrun with 'em."

"We don't carry poisonous gas about with us," the commissioner was explaining in response to the commissioner's inquiring look. "But I could have some over here."

"Better get it. And rush a couple of squad cars with machine guns down the street to the nearest entrance to this new tunnel. Tell 'em to keep these things from passing 'em, if they have to mow down the lot. We can't have them invading the operating subways. The city'd be panicked."

The captain nodded agreement and turned to issue orders in a voice subdued by horror. Men darted to their cars and tore away. The captain jerked his head toward the hole.

"Want us to try a few rounds on 'em, sir? Might scare 'em back where they came from."

The commissioner hesitated, remembering how half human those forms seemed. Then his face hardened.

"Give 'em a few shots," he nodded. "See what they do."

THE machine guns leaped to shoulders. The officers stepped forward. Barrels depressed to send a hail of bullets down into the teeming horde as guns leaped and chattered.

The effect was nil. Again the sound creatures picked up their dead and wounded comrades and bore them easily to the rear, even as an army of ants might dispose of their dead or wounded. The others showed no alarm at the stutter of the guns, no fear of the lashing bullets.

"They ain't human," gasped a gunner falling back.

It was evident that they lacked normal human reactions. The absence of any flinch at the discharge of the guns would indicate that they had no sense of hearing. Blind and deaf, they must rely on their sense of smell and their delicate sense of touch to guide them, yet they darted about as quickly as the most energetic and highly animated human being.

Yet they seemed to be much like human beings in their structure. Edwards had stared hard at those that poked their heads into the daylight and was convinced that their bodies more closely resembled man's than any insect's. They were plainly of flesh and bone, although their whiteness made him hesitate about declaring they had blood as well. The bone, furthermore, was an internal rather than an external skeleton, definitely putting them in the mammal class.

"It would take a week of constant firing to kill 'em off," sighed an officer who had been peering down into the hole, where more and more of the things kept swarming past. "Chernick and Gates won't be able to stop 'em for long."

Before the car was back with poisonous gas, the faint rat-a-tat-tat of the machine gun far down the completed portion of the tunnel was faintly audible

over the moving rattle and suction-breaking noises of those hundreds of darting figures squirming and wriggling and writhing past. Soon observers saw the returning creatures bearing their dead back into the lock, as more and more continued to shove forward.

The chatter of the distant machine gun became a steady purr. Then it slowed, stopped.

During the silence there came the scream of a police car siren up the street and the squeal of a hastily applied brake. Then one of the two that had been sent to halt that rush screamed in terror, "We run out of ammunition. Gates was goin' to hold on while I went for more. They came at him along the walls and even along the roof. I see 'em swarm over him. They've passed that entrance."

"Look," gasped the observer staring in fascinated horror into the hole. "There he goes."

It was true. Held in the same fashion as the sand hog Edwards had seen borne off into the earth, the body of Gates was riding past on the back of one of the stooped creatures that fought its way through the horde of newcomers toward the retreat whence all had spewed.

"Come on with that gas," screamed the commissioner. "Kill the devilish things. We've got to put an end to this. They must be stopped. Rush more machine guns and gas down the street. Try to halt them at each entrance. Shoot to kill."

THE captain barked his orders. More squad cars tore away carrying white faced officers. Jerry Edwards swung toward a phone.

"Who you callin'?" barked the commissioner.

"Friend of mine on a tabloid. A kid who deserves a break. She'll spill the story of her lifetime."

"Don't," gasped the white faced commissioner. "Imagine what it'll mean. The city'll be panicked. Nobody'll dare to use the subways. Everything'll be tied up. Surface accommodations can't begin to handle the mobs. We've got to keep this thing quiet until it's licked. Think what it'll mean to the thousands who visit the city every week."

Jerry Edwards shook his head. He knew that this dread menace beneath the streets of the great city would undoubtedly drive away prospective visitors, send those already on hand and spending generously into a panicky departure.

On the other hand, he knew what those things had done to thirty tough sand hogs and as fine a foreman as ever drove a hard working crew. He shuddered to think what a drove of them would do to men, women, and children in subway stations and trains far below the great city.

"Can we take the risk?" he asked seriously.

"Of course we can. We'll gas the devils, mow 'em up with hand grenades, pour 'em full of machine gun bullets. There must be an end to 'em."

"Somebody'll break the yarn. I want my friend to have it."

The commissioner waved a hand. After that first

quick glance at the poking heads protruding inquiringly from the hole, he had whispered orders. A cordon of police had refused admission to everybody but officers. Not even a reporter had come near enough to the job to guess what was happening.

"This story can't leak," snapped the commissioner. "That's understood. Not a man of you is to whisper what has gone on here. This thing must not reach the press until the danger is past. We can't handle the panic that would result."

Jerry Edwards thought of that girl reporter riding homeward on the subway, getting off at an uptown station, perhaps even now grinding nearer and nearer to that horde of queesting monsters on her way home. He shuddered at the thought of those horrible suckers sliding their cold embrace over her soft flesh.

"I'm phoning her," he said grimly, "to keep out of the subways at all costs."

The commissioner stepped close, his eyes pleading.

"Don't tell her why, I beg of you."

"Okay by me. But I'm warning her. I want none of mine facing those inhuman things if I can help it."

The gas came before he got her. He saw them donning masks around the hole, cheerfully preparing to kill the things below wholesale. If machine guns were operating far down the back stretch at distant entrances, he could not hear them.

"Let her go," called the commissioner.

He saw the officers retreat, saw something hurtle down the hole. Then he got his party.

"Miss Cartwright of the *Flash* speaking."

"Listen, Kate, this is Jerry, calling from the job. It's important. Matter of life and death. Do something for me? . . . Yeah, no questions asked. Cross your heart and all that? . . . Don't think I'm screwy, kid. I was never more serious in my life. Keep out of the subways. Ride a taxi or a surface, but keep above ground. Get me? . . . Listen, it's no astrology nor spirit warning. It's serious dope. Tell you about it some time. But don't go below ground until you hear from me it's safe. . . . No, it's something you'd never dream about. You'd think I was crazy if I told you, but I can't. Police commish says it's not to leak to the sheets. But do believe me and keep above ground. Whatever you do stay out of the subways."

Ruefully half convinced from the bantering tone in her voice that she would promptly hunt for the nearest entrance, just to show her independence, he pronged the receiver wearily. But the sight of that officer in the gas mask reeling back from the hole brought him back to the problem at hand with a jerk. The man was ripping off the mask, revealing a countenance drawn and worried.

"No effect on 'em at all, as far as I can see. They're still scurryin' past as if we'd tried nothin' on 'em. That dose would've wiped out a regiment caught without masks on."

Edwards nodded soberly to himself. These weird creatures from below must be equipped by nature to cope with pockets of deadly gas they must encounter

frequently. Something other than gas must be brought into play if they were to be stopped in their mad drive.

But the reports that came in were discouraging. Entrance after entrance was the scene of another vain attempt to halt them. Machine guns roared at them; hand grenades burst among them; a fire-thrower, rushed from a nearby armory, seared them and seemed about to halt the charge but ran out of fuel, allowing the massing hordes to sweep on and on.

"Less than half a mile beyond," moaned Edwards, "that tunnel leads onto a track where trains are operating. There's no knowing what'll happen when they hit that."

"The trains'll scare 'em," declared the commissioner, but it was more wishful thinking than conviction that prompted him.

"They can't hurt the trains much," declared the anxious Captain Merkel. "What I'm worried about is the stations. They'll raise havoc there."

CHAPTER II

The Horde Invades New York

AT the *Flash* Katherine Cartwright set a crazy little stylish hat at an absurd angle and pulled down her tailored coat over her trim hips. With just a bit of feminine determination to ignore the plea, advice, or orders of the man who thought he had some right to boss her around, she tripped toward the door.

"I smell a story aching to break," she smiled at the city editor. "Mind if I dash out and splurge it all over the front page? It'll be a wow, I'm willing to bet."

He did not bother to take his feet off the desk nor his hands from behind his head. He merely peered up at her incredulously from under his hatbrim, which had been cocked low over his brows so that he could doze.

"When you stumble on front page stuff, sister, the drinks'll be on me," he yawned. "But go have a soda with the boy friend, if that's what you want. Things're dead 'n dead this afternoon."

She hurried toward the elevator, thinking as it swooped earthward, of what Jerry Edwards had said about keeping out of the subways. If that guy thought he could order her around, just because she suffered his presence now and then, he had another think coming. She fairly ran for the subway.

Hastily she figured out the line that would take her nearest to the job where Jerry was working. Whatever he had in mind would be likely to emanate from his job. Probably they had tapped some gas that was escaping, were afraid it would cause an explosion or a fire.

He needn't think she was going to let a little thing like personal safety keep her away from what might be the story of the year. A big blow in the subway would make a sensation, people fighting through the darkness and smoke for light and air. Smashed trains. Screams of women. Madness of men gone crazy with

the desire to live. She would see it all at first hand, stand on the sidelines and watch, carry back to her paper a vivid eye-witness account—if she could only get there in time.

She made her switches anxiously, caught an express, watched eagerly for the right station to switch to a creepy local. Her leg work on the rag had taught her every trick of beating the clock in Manhattan's network of sub-surface trackage. Less than half an hour from the time she received Jerry Edwards' message, she was on the local and sliding toward the spot where the new branch would take off from the old track.

"Listen," she gasped, after fighting her way to the motorman's tiny compartment in the foremost car and tapping on the window until he dropped it to hear what she had to say, "something's due to happen along here. I'm a newspaper woman. I just got a tip."

He looked at her dourly, shifted his quid of tobacco, looked back at the unreeling tracks that shot at them steadily around the bend.

"What's likely to happen is I'm likely to get sacked for talking to a passenger while on duty. Ten or twenty years ago I'd've took the chance, but not even you—cute a trick as you are—could make me try it today. I'm gettin' too old."

"Take things easy," she begged, as the window started to slide up.

"Can't. Gotta hold to schedule, or they'll put a younger man on. If seein' the track open out scares you, go on back inside."

She did not answer. She was peering ahead, staring at the unwinding walls of concrete with the occasional offset for workers who must avoid trains, with those gleaming tracks glittering away into complete darkness ahead.

She almost screamed at the sudden glow ahead. It must be the fire. Could they stop in time?

But the motorman did not stop, did not even slow for several lengths. Then he brought the thundering train into the local stop and lowered his glass to grin at her as the doors clattered noisily open.

"Don't get your game, sister, but you sure are a looker," he ogled her. "Wish I was twenty years younger."

She did not answer, merely gave her body that little jerking twitch she always did to quiet a masher, and stared straight ahead. Out of the corner of her eye she could see a few passengers straggling towards the stairs. She found herself mentally congratulating them that they were safely out of it, whatever it was that threatened.

"I'm goin' off duty after the next run," said the motorman hopefully, "if you're still of a mind you want to talk we might try some beer and pretzels at a place I know."

Again she stiffened her shoulders in that way Jerry Edwards said would discourage anybody but a maniac. The doors clattered shut, the window slid up, and they started to move.

She tensed, her little hands knotted into fists. It

was awful standing there staring ahead into the ripening darkness wondering what it was she must expect. At any minute they might roar into a mighty conflagration blasting down the tunnel. The sparks streaking from the biting wheels that fought to cling to the steel rails might set off an explosive gas that had seeped into the locked air.

They swept around a seemingly endless curve and tore down a straightaway. He opened the throttle wide, making a little face at her worried countenance as her eyes begged him to slow.

Far down the track something gleamed. The floor, walls, and roof of the tunnel seemed lined with something that glowed faintly. She thought of the nitre on the walls of the catacombs in one of Poe's short stories: *The Cask of Amontillado*, wasn't it? and shuddered.

"They're bodies," she screamed, turning to find that the motorman was ogling her instead of watching the track ahead. "Naked bodies on the track! Stop before you run into them!"

SHE had a blurred wonder flash through her mind if this was some new sort of fanaticism, some combination of Gandhi's passive resistance and the Dakobars' nakedness. What, she wondered, could it possibly mean?

Then, just before they struck, she saw that they were not human, but weird creatures as large as men, shaped generally much like human beings, but otherwise much like giant insects. A scream of horror burst from her as the motorman, aware now that the tracks were teeming with something, slammed on his brakes.

She heard the sickening crunch of flesh and bone under those massive wheels even as the shoes gripped and the steel complained. She crashed against the forward window and nearly pitched through it into the shambles of piled bodies massing before the driving car, but braced her hands on the sides of the door and was saved from that.

But she had a good picture of those horrible things, caught some vague idea of their numbers as she hung there waiting for the train to stop so that she could recover her equilibrium and flee back along the aisles. Roof, walls, and floor of the tunnel were covered with those ghastly crawling bodies as far as she could see ahead down the broad passage.

Men and women were already fighting at the doors, clamoring to be released. The crushed bodies under the wheels had lubricated the brakes, so that the train slid almost its entire length into the horde before it stopped. Suddenly the train was plunged into darkness that brought a fresh scream of terror.

"Don't open the doors," roared the motorman, but he was too late. Already the guards had obeyed instinct or the clamor of the remaining passengers and started to open them.

Panicky men rushed through them, leaping into the darkness. That faintly phosphorescent glow of the teeming bodies closed over them, but their shrieks of horror resounded through train and tunnel.

Glowing heads peered in at the opened doors, horrible sucker hands clamped onto the floor to drag naked white bodies nearer.

"Come on," called the motorman, seizing his visitor by an elbow, "I'm getting you out of here. The Lord alone knows what has hit us. Run down the aisle. Run for your life."

He had a flashlight out and was playing it for her. The cars were almost empty. The few passengers that had not leaped were climbing the seats, swinging in terror on the straps, screaming hysterically as the ant-like things jerked their way into the cars, their antennae waving, their mandibles working hungrily.

The first car was fairly invaded as they left it. The second was barely touched as yet, a single white head appearing at the door. The third and last was deserted by human beings and ant-men alike.

"Keep right on going," urged the puffing motorman. "Them damn things are killers. I see one of 'em biting into a guy in the first car. Let's hope they slow down enough to give us out."

He threw the beam of his light back once. There was great activity among the marauders around the train. He had a confused picture of human bodies and crushed and mangled invaders being lifted and borne back up the tunnel. Then he saw that the advance guard was past the end of the stalled train and he turned to urge the girl to greater speed.

"Ladder up ahead," he gasped. "Keep an eye out for it."

The beam of his flash swept in a lifting and falling arc as he gallumphed along behind her. Her stilted heels made running difficult, but she managed to keep up somehow.

"There it is. Swing up it. Fast."

She ran like a terrified monkey up the steel rungs. Behind them darted the advance of the invaders, their antennae quivering as if with awareness of human presence near at hand.

She found herself against an iron manhole cover and tried in vain to lift it with her head and shoulders. Then the wheezing motorman, sensing her difficulty, squeezed past her to shunt it up and off.

His fat body was pressed hard against hers as he heaved. She felt him thrust the cover away, relax, and then tense again. His face was so close that his hot breath blew into her neck. When his muscles tightened in an even greater effort, she felt his terror ooze out to her.

"Take this flash and hurry up through," he gasped, making an evident effort to control breaking nerves. "And—tell the old woman I did my best to come through."

Then she saw that he was slowly being torn away from the rungs, although the steel actually bent under the pull of his powerful fingers and his lungs whistled with the strain.

His eyes, glaring out of a white face, told her to go on up. In another instant he was gone and she was scrambling through to safety. Whirling, she clamped

the iron cover down onto a horrible white head with ugly blue patches where the eyes should be. Then she hurriedly piled onto the cover a number of boxes that stood against a neighboring wall.

SICK and giddy with what she had seen and what she had escaped, she went on up. Another ladder led to the street. The sight of the afternoon sun cheered her. She could almost believe that what she had witnessed down in the subway was all a horrible dream. Then she saw a squad car draw up to the subway entrance just below her and spew officers armed with machine guns and white faced with terror into the yawning opening.

"Jerry," she whispered, starting for a phone booth on the run, "you started me after the weirdest story that has ever broken in Manhattan, but I wish to God it weren't true."

Change makers at local stations fled or were seized by the horrible swarming creatures. Trains were utterly lost during the next few hours. Anxious parents, worried dispatchers, and terrified patrons of the subway who saw the invaders approaching and fled in panic to the surface deluged police stations and newspaper offices with queries.

Thanks to Katherine Cartwright's newspaper instinct and the ability she possessed of remaining calm enough to write a coherent story, even under such trying circumstances, the city was aware within an hour of her escape of the threat that stalked beneath the pavements. Colorfully she pictured that ghastly scene of the stalled and raided train. Readers of the *Flash* rode with her on that forward platform, felt her fear of the dreaded unknown ahead, flinched with her as she revealed in her gripping style the mighty horror she had known.

Not a detail was spared. Her labored escape with the motorman and his last request, before he was hauled from shielding her by one or more of their pursuers, made the necessary human interest touch to turn her story into a masterpiece.

The commissioner lifted his ban against talking of the horror when the editorial in the *Flash* accused him of sacrificing the lives of those trapped below the earth's surface and endangering the lives of untold thousands of others by refusing to warn them of the danger.

He issued a frantic explanation that he had underestimated the effects, that he had been convinced the horde of invaders could be stopped by the heroic police efforts, that he had never dreamed they could stall trains and attack the passengers in such a fashion.

His answer, flashed out in extras by every paper in town, carried one reassuring note. The strange creatures seemed intent upon keeping beneath the surface, drew back at contact with the open air. Evidently the populace of the city was safe if everybody kept away from the subways.

Darkness fell to the tune of radio announcers blaring out theories regarding the invasion. Lifting the

ban of silence had resulted in disclosing to the public that the swarm came up from a fault in the ledge ahead of the new excavation. Hastily contacted scientists gave fantastic explanations of what they might be and whence they had originated. Not since the Orson Welles fright had men and women crouched in such terror over their loud speakers.

But this time the horror was real. Dialing in new stations for denial, they found confirmation instead.

THEN the horror grew. With the coming of darkness the horde no longer remained confined to the subways. All over the vast network of underground tracks there were darting white figures appearing, poking their heads out of the entrances, scuttling hither and thither on sidewalks and streets, probing doorways, rattling their suckers and mandibles against plate-glass windows behind which cowered horrified diners.

"The hope that the invading army of ant-like creatures would remain in the subways seems false," shouted an excited voice over the loud speaker, even as the guests screamed and women fainted. "With the dying of light, the horde has crept up the stairs. Reckless of the white glare of the brightest streets in the world, the horrid things are at this minute terrifying the Broadway habitues and carrying off the unfortunates who fall into their grip.

"We have a dispatch from the Forty-Second Street station at Times Square, junction of so many lines. Eye witnesses who were able to escape the sudden rush of thousands of the monsters claim that the invaders killed but a few of their victims, carrying many off alive. The terrified wails of the captives echoed weirdly through the vaulted tunnels as they were borne off on the backs of their captors, bound for some unknown fate in the dark depths from whence the invaders came."

Jammed into the restaurant before which those clawing figures were massing, Jerry Edwards seized Katherine Cartwright by an elbow and fairly lifted her to her feet.

"We're not stopping here," he said grimly, hurrying her out.

"But we can't face them, Jerry. They'll—they'll kill or capture us. Are you crazy?"

"Not crazy enough to loiter there. Here, shove into this elevator."

"Sorry, boss," grinned the boy on duty, "unless you get a key to an office above, you can't ride. After office hours, you know."

Edwards bent close to him, his eyes boring:

"You been reading the papers, boy?" he asked. "Or listening to the radio news broadcasts? Have you happened to see what's clawing at the outside doors?"

"Yeah, what are they? Know the answer?"

Edwards laughed. He had been considering that for hours. He had a name for them, a name that was to strike the fancy of the city when the girl reporter used it in her next special.

"They're *termanites*, a cross between the wood-devouring white ants of the tropics and human beings. And I know something else that hasn't hit the papers yet—they can bite through sticks of oak timber twelve by twelve square. They did on the decompression lock on the job where they broke through. Figure what they'll do when they sniff that wood that the doors are hung in! Now, take us up."

"I'm a newspaper woman," explained Katherine with an ingratiating smile. "I've got to get that to my paper. The city must know all that we can tell them about the things."

Half a dozen of the *termanites* were visible, even as the boy stepped aside to admit them to the elevator, rearing on their hind legs and snapping with those oddly extended cutting edges at the mouth, around the hinges of the big doors. They could hear wood rending and splintering:

"Hold it for me," called Edwards sharply.

He leaped back to the glass doors of the dining room and shoved them open, noticing that they were hung on metal, with no wood in evidence. His voice boomed out as if he were calling a group of disorderly sand hogs to order.

"Listen, people," he roared. "Your lives may depend on following instructions. I was at the scene where these things first broke through, and I know a little of what to expect of them. They can cut wood as if it were bread. They'll have those outer doors off their hinges in no time."

"It's a lucky thing for you that doorway is narrow. If you're smart, you'll upend that glass showcase against the door and barricade it. Then pile tables and chairs against these doors that lead into the main corridor. They're coming through any minute."

He did not wait to see if his orders were obeyed, but leaped for the elevator. The outer doors to the main entrance of the big building were swaying before the shove of those crowding bodies. He saw the white faced proprietor of the restaurant rallying his men and the male diners to the job of barricading the place. Then the door clanged shut, and they were shooting upward, just as the outer doors crashed.

"Get us to a phone fast," urged Miss Cartwright.

"The police and the public must know what we know. Jerry, what is to be the end of all this? Is the city doomed?"

"There's got to be an end to them," he insisted. "As they spread out like this, they will be falling victims to the police. Steady decimation will cut them down."

"But what can we do, Jerry? Won't they come up after us?"

"They might. I can hold them off for a while—like Horatius at the bridge. I doubt if their suckers will work any too well on marble or imitation marble. The surface is probably a little slick for good traction."

THE terrified elevator boy shot them to the top story and let them into a room which he unlocked. He loitered, after showing them where the phone was

located, as if unwilling to get far from them.

While the girl reported to the city desk, Edwards leaned far out of a window and studied the street below. The usual flood of electric light bathed the scene, but the cruising taxis, the raucous pleasure cars, and the pushing mobs of people were gone. Not even a trolley car moved on the streets. There was no life in evidence except scattered numbers of the termanites darting about questingly or knotted before doorways where the scent of packed humanity seemed to draw them.

A faint scream wafted up to them and they saw a tiny figure far below rush frantically into the street. Behind it, darting and dodging like puzzled hounds on the scent, were three of the ghastly white figures that gleamed with an even more intensive whiteness in their nakedness under the glare of the thousands of bulbs.

The speed of the fleeing figure lagged. That of the pursuers increased. Suddenly the terrified woman stumbled, but was caught before she struck the pavement, lifted, swung in air, and carried triumphantly off, still kicking and screaming hysterically, back the way they had all come.

Grim with the horror of it all and his inability to do anything to stop the carnage, Edwards turned to the girl.

"They're all over the city," she said in despair. "The populace is terrified. Everybody who has an automobile is vacating for the open country. The police are shooting the termanites down all over the city, but there seems no end to them."

"They ought to flood the tunnels and station militia on the bridges to confine them to Manhattan," suggested Edwards.

"The governor has called out the militia. Every machine gun available is being rushed to the outskirts to make sure the horror is limited to the island. But think of the millions left here, Jerry. What is to become of them—of us?"

The horrible noise of suction feet tearing loose from walls warned them. The elevator boy went ghastly white.

"You'll be safe in your cage, kid, if you're afraid to stay with us," called Edwards. "Shut the door and drop between floors. They can't reach you then."

The lad shook his head. He was searching vainly about the office for a weapon.

Edwards picked up a chair, a solid oak affair, and crashed it to splinter away the back legs. They extended up beyond the seat to form the sides of the backrest, making serviceable enough cudgels when rounds and back slats and seat were knocked away. Armed with these, the two went out into the marble corridor, the girl following.

A single bald and gleaming head with its sickening looking undeveloped eye blobs was peering around the corner at the top of the stairs. Edwards leaped forward, his club upraised. All of the pent-up desire to fight the ghastly menace that had been wreaking such havoc all about him went into that blow.

The head burst like a ripe orange, spattering a watery fluid over the walls. The body, twitching and jerking in the throes of death, released its suction grips and started to slide down the marble stairs.

In an instant Edwards had leaped and grasped it, halting the descent. A glance sufficed to show that there was no other termanite in sight. Although he listened, he could hear no more of those squidgy suction sounds approaching.

"Watch for any more of 'em, kid," he called to the boy and lifted the dead body.

IT was cold to his touch, heavy and limp as a dead human being. Sick to his stomach and fighting hard to keep from retching at the proximity of the ghastly thing, he lugged it into the room they had just quitted and bent to examine it.

"Low body temperature," he checked. "Probably from living naked in those subterranean caverns from which they come."*

"Look," gasped the girl, forcing herself to bend close and assist, although sick with horror. "The skin is slick—has no pores."

It was a fact. The skin showed no signs of those tiny openings so essential to the health of earth surface dwellers.

"They come from such an even temperature that they have had no need for body radiation for—well, maybe for millions of years," nodded Edwards. "Extreme heat or cold will probably kill them. Let's pray for a hot spell. If those tunnels will only bake as they often do at this time of year—"

"They won't until too late. Haven't you ever noticed how perverse the weather always seems? Jerry, how many arms have they?"

He bent close over the peculiar formation, tearing his eyes away from the ghastly head with those sliding cutters that were more formidable than the teeth of any animal he had ever seen, even of the vaunted saber toothed tiger of prehistoric ages.

"Look, they've only two arms," he gasped.

"How can you say so? Here are eight or ten."

"You're wrong, keed. Remember your anatomy, or didn't you take it? See, we have two arms here at the shoulders, short upper and lower arm bones as in most mammals. Those things that look like arms are over-developed fingers. Eight active ones and two immobile ones that correspond to the almost useless thumb of the early man. Each of the eight is equipped with a suction plate."

*The termite is an active, crawling creature with six legs, and there are both winged and wingless types. They have a social community in which various tasks are carried out by specialized types, just as in ant colonies. Scientifically, they are described as *Termitidae*, of the order *Isoptera*. The nests of the termite are built of earth, hard and persistent, and sometimes more than twelve feet high. These nests are divided into chambers and galleries of great complexity. There are generally two or three roofs within the dome-shaped interior. Termites attack the wood of houses, and soon reduce the thickest timbers to mere shells. The termite of the United States is called *Termites flavipes*, since this is the only type with a northward range. They are known more generally as the "white ant."—Ed.

It was true. The similarity to human structure would have delighted a disciple of Darwin. Here was yet another astounding proof of the general relationship of vertebrate life.

Their findings were phoned in to the paper, which was issuing no fresh extras because the entire staff was barricaded behind closed doors to escape from being over-run by the termanites. Even if a paper could be printed, there was no way of distributing it.

But the information was duly forwarded to the broadcast stations, safe almost in the clouds at the tops of tall buildings. A detailed report of their findings went blaring out to anxious listeners.

Sexless as far as investigation showed, the creatures seemed incapable of reproduction. They were evidently like the workers of certain colonies of highly specialized insects, the form that lived solely to keep the reproducers of the race in idleness at home. Edwards shuddered at his imaginary conception of what the reproducing agent must look like, if it was in proportion to these others as the queen bee of a hive is to the honey gatherers.

He sensed that the city could never be safe again until whatever it was that produced such hordes of the fiendish things was dead in its dark cavern somewhere deep in the earth.

All night the city remained barricaded. Then dawn brought relief. The termanites scuttled back to the subways with the coming of daylight. Like nocturnal things afraid of being seen by day, they scurried and scuttled from alley and entries, from office buildings, theater lobbies, and other places where they were nosing about. By full daylight, when a red sun poked its inquiring head up to see if the rumored horror had really existed, there was no further evidence of the things above the street level.

But they had retreated no farther than the subways, as courageous investigation showed. Under the city the tunnels were crawling with the inquiring hordes that still darted about singly, in pairs, or in files like so many queuing ants poking inquisitively about to familiarize themselves with the situation.

All morning long the police kept edging down to pop at them. A watch stationed at the original spot of entry reported that an almost constant stream of returning termanites was massed there at dawn carrying back into their caverns their dead and living victims of the night raid. Of the burden more than half seemed to be still alive, appealing with pathetic glances to the faces peering down at them, as they passed onward, to do something to rescue them from the horrible fate that evidently awaited them.

CHAPTER III

New York Declares War

EDWARDS and the girl had hurried back, hoping to be able to gain some idea of the extent of the raid. Sick with horror, fortified with black coffee

gulped hot, they stood and stared.

"Hey," screamed a boyish voice, "here's a couple here in this hole. Look at 'em try to climb out. They can't get footin'."

Edwards leaped. There was an excavation started on the site for a foundation. The big steam shovel was idle in the pit, a great hole with loose gravel sides.

They could hear gravel trickling, even before they saw the prisoners. Frantic, seemingly in some kind of torment, the two termanites in the pit were trying in vain to clamber up the sloping, sliding sides. Their suction grips found no real traction, only starting the loose gravel to rolling and tumbling, to precipitate them down again after they had run up the growing pile of tailings that had already accumulated at the bottom as a result of their tearing down the walls.

"They'll build themselves enough of a pile down there to raise 'em out. Shoot 'em," called somebody.

An officer jerked up his gun ready to carry out the suggestion, but Edwards stopped him.

"They're frantic over something," he said quietly. "Suppose we watch 'em and see if we can learn anything about 'em. That's the way to lick 'em. You can't defeat the unknown half as successfully as you can the known."

The policeman gave him an odd look, but held his fire. The creatures kept up their frantic struggles.

Then the sun, which had been shut off from them by the depth of the pit, slanted a beam at them. As the bright ray gleamed on the white flesh of the rearing creature, the termanite floundered madly away, tearing and lunging as if in a frantic effort to get at the suddenly reddened and blistered spot where the ray had struck.

Edwards tightened his fingers on the girl's arm, gazing intently, his eyes shining with hope.

"I've got it," he gasped, as the termanite fell, kicking feebly in a death struggle and the survivor, touched in turn by the sun, went into a similar mad gyration of agony. "They're not equipped to stand sunlight. The violet rays that eventually burn our tenderest skin when it is exposed for a long time, bite into theirs because they have lived for so many generations underground that they're particularly allergic to it, have never built up resistance."

"But—but what difference will that make?" hopelessly.

"That makes a lot of difference, keed. That explains why they shun sunlight, but venture out of the same holes by nightfall. There is ultra-violet in daylight, intensified in direct sunlight. The subways are cut off utterly from the rays—and are safe for them. But they won't be long."

She stared at him. "But you can't strip the top off the subways, Jerry, and let in the sun. Our streets are built over them, houses, huge buildings."

He laughed, running toward his automobile, dragging her with him.

"Don't worry about that. We can beat sunlight, keed. Pump the info to that rag of yours and the news

broadcasts that the city is safe above ground by day, that a scientific discovery has just been made that bids fair to sweep the subways clear of the invaders before many more hours. The fight's as good as won."

"But—but I don't understand, Jerry."

"Brain fag," he grinned, reaching a sympathetic finger to tap significantly at her skull, "or your feminine assurance of being the equal of the male would be sure to remember an invention called the ultra-violet lamp, in use for years now in aiding recovery from sprains and singular deep-seated injuries. Flood 'em with it. Burn the devils down—sunburn 'em to death by the thousands! Quicker, easier, and cheaper than sniping at them; dropping hand grenades, or even the gas that wouldn't work. Watch my smoke."

TEARING down street, he switched on the car radio and heard the announcers at different stations proclaiming that the invading creatures, now generally called termanites in all discussions, were susceptible to the rays of ultra-violet lamps.

Edwards had telephoned the executive offices of the subway management while Miss Cartwright was phoning her sheet. He had begged for an accumulation of all the ultra-violet lamps that could be bought, begged, borrowed, or stolen. Rush orders must be shot to Jersey where they were manufactured. The biggest bulbs available were demanded delivered at once to Times Square for immediate testing. Extension cords by the mile must be accumulated.

It was the courageous young engineer who lifted the first lamp and headed for the network of tunnels, stairways, entrances, and exits at Broadway and Forty-Second Streets. With hope lighting his gaunt face for the first time since he had seen that horror in the lock at the job, he pushed past the policeman who were firing in desultory fashion at the white things below and slid down past them.

The thumb and finger that turned on the light were steady. Behind the shielding reflector that made his powerful lamp a beam, he felt safe from those rays that might otherwise have seared him in time with their blistering force.

Half a dozen termanites, sensing his bold approach, darted toward him with the characteristic motion of their kind when about to kill. But the beam from that lamp caught them. The rays, far more intense in the killing ultra-violet than the normal sunshine, bit into their sensitive bodies. The white skin turned lobster red, even as the pain grew intense and they hurled themselves backward down the steps in a vain effort to escape the torture that left them at the foot of the stairs, crumpled and inert in death.

Their fellows came to wave inquiring antennae in wonder before them, to lift their seared bodies, to bear them away. But now the beam of that lamp was sweeping over the teeming numbers at the platform. Before its roaming reach the moving masses broke into the same frantic antics as their fellows, to end in life-

less huddles on the cold cement.

More and more termanites came questing from other levels. They hurried up and down ramps. They sucked and squigled along walls. They poked their waving antennae out of stalled cars they had been ceaselessly investigating.

They seemed utterly devoid of resistance to even the tiniest dose of the ray. A few dodged back to safety from the edges of the beam, but those caught squarely in the sweep were touched with death a full sixty or eighty feet beyond where he stood.

Triumphant, Edwards screwed spare bulbs into the sockets he could reach, diffusing the light over the area formerly lighted by normal electric rays. He had the satisfaction of seeing those termanites that ventured over the increasing heaps of their dead fellows go into similar frantic fits and die under the influence of the light he was rapidly leaving behind him as he paid out cord and went on to kill more and more of the invaders and install more and more lamps in the sockets beyond.

Timid observers who had doubted the efficacy of his rays now tumbled down to help him. Stepladders were raised to replace the bulbs he had been unable to reach. Other hands fed him more and more extension cord, plugging in new lengths, trotting eagerly along to make sure that he covered the entire station.

It was evident within an hour that the city was saved from that wave. Edwards had not only cleared the mighty terminal at Times Square, but had rigged a powerful bulb in the searchlight at the front of a train and headed down the track to try its effect. The creatures fell in torment before its beams. The rays swept walls and ceiling as well as the floor.

Instantly word went forth. Ultra-violet lamps were rushed by fast train, truck, and airplane from neighboring cities. The bulbs that were not needed to prevent the creatures from returning along tunnels not yet swept clear of them, were removed from the sockets and carried away to be pressed into service elsewhere to clear other stations.

Squads were organized to clear up the dead. Gangs went ahead of creeping death-dealing cars to remove dead bodies from the tracks and stack them on the sides where they could be picked up later by the work trains assigned to collecting them and transporting them to the garbage scows for burial far at sea.

HALF dead from worry, over-work, and sleeplessness, as well as from the horror of the job of killing such thousands, Jerry Edwards finally released the job to others and staggered to the surface. At last he felt that he had compensated in some measure to the city for whatever share he had borne in releasing the hordes. Now he felt that he could relax and sleep.

But before he allowed himself that luxury, he would give Kate a buzz and tell her how things had gone. The trains were mopping up in the subways. Practically every line was clear. A squad had just left to walk into the new spur and brush the termanites back

into the cavern whence they came.

"Yeah, and hang about a dozen of those lamps right on the hole," he had warned. "Make sure none of 'em sneak by."

"Sorry, Miss Cartwright is out," chirped the operator on the board at the *Flash* office.

"Where is she? This is Edwards speaking."

"Oh, yes, Mister Edwards." He grinned at that. Since he had been news these last few hours he had stepped up considerably in the estimation of that dumb blonde on the switchboard. Hitherto she had coldly informed him that reporters were not to be disturbed during office hours for personal affairs. "I'm glad you called, Mister Edwards. We're getting anxious."

"Anxious about what? Where is she?"

"She got a report about three hours ago that her home was raided by them termanite things. Her mother was carried off by 'em, screamin' fit to kill for Kate. Guess the old lady thought Kate could do anything."

"But—but where did Kate go?"

"Where'd you go if your mother was captured like that? She lit out for that hole where the darned things come from, hoping to see her as she came past, to do something about it."

Cold and sick, he pronged the receiver and leaped for his car. Red lights meant nothing. Let the cops blow. Let the pedestrians and the cross traffic watch out for itself. He was going places and going fast. Like a burning streak he lanced up the length of the city, barely missing accidents by an eyelash, the accelerator down to the floorboards, the engine roaring its loudest.

Yet it seemed to him that he was crawling, although the needle touched seventy at times and the car fairly flew from one hump to the next without bothering to crash down into the depressions. With his hands white at the knuckles from the intense grip on the wheel, his nerves jangling from concentration and the million narrow escapes he sped past trolleys, trucks, busses, and taxicabs, wormed his way through cross traffic that cursed fluently after him, bore on smoking tires toward that hell hole where the one person that really meant anything in his life was undergoing an ordeal such as no human being should ever be called upon to witness.

Men were coming up that tunnel, scarcely a mile below the hole, with their searing lamps clearing floor and walls and ceiling of the dying creatures that dropped before them. But he knew they would be too late to liberate that sweet little old woman that the things had seized during the late hours of darkness.

He knew in that awful dash up the island that his job was only partially finished. In his exultation at having started the great sweep that would drive the things back to their lairs and keep them penned there forever he had forgotten those screaming captives borne off alive into the depths. Not until they were found, dead or alive, would the work be finished.

He almost wrecked the machine hauling to a stop

near that hole. He burst his way through the mob of curious. Barely able to speak in his excitement, he stared around at the faces lining the rail.

She was not there.

"Anybody seen Miss Cartwright?" he gasped, aware that her frequently published picture running beside feature stories had made her a familiar figure to New York's teeming millions.

"Yeah, that's the girl who jumped," vouchsafed a boy.

"Jumped? Jumped where?"

He knew, even as he asked. The world was reeling in a mighty wheel of sickening horror. He had thought this thing terrible before, but now the full significance of what it meant to those who had lost loved ones in the attack struck him like a blow of a fist to the pit of the stomach.

SHE had jumped into the hole, of course. Impetuous, big hearted, sympathetic under her newspaper pretense of being hard-boiled, pretty Katherine Cartwright loved her sweet little old mother as few girls of her generation love and revere a parent. Left to earn the bread for that mother by her father's untimely death, she had assumed the protective attitude that the father had always shown toward the gentle little woman whose very presence seemed to all who knew her a last breath of that lavender-and-lace femininity that seems to have perished almost completely in the hard-boiled hurly-burly and fight for existence that characterize the modern world.

Mother Cartwright was an institution. Mother Cartwright was a religion. Once having known her, life would be unbearable to one of her disciples who had stood at that rail and watched her carried past and done nothing about it.

Remembering that he had felt an almost irresistible impulse to leap from that high window the night before and battle for the unknown woman he had seen overpowered and borne off by pursuers in the downtown street, he understood the Quixotic impulse that had made Kate Cartwright leap at those fiendish things bearing off her dearly loved mother.

He felt his own muscles tensing to spring down there and lay about with lusty blows. Sheer mad instinct to kill flamed through him, made him berserk as men, sensing his intent, leaped and seized him.

"Let me go," he screamed frantically. "I'll show 'em. I'll kill 'em. I'll clean 'em out with my bare hands."

They carried him, still kicking and protesting violently, back through the mob. The same police captain who had been on hand at the first alarm bent over him.

"Better take it easy, feller," he urged. "No use killin' yourself. What's gone is gone."

Edwards had sobered, awed at the combined strength of those many hands that had gripped and held him. Somehow it was as if he had fought the termanites and been bested. But he was not beaten.

"Listen, chief," he babbled, smart enough even in his excitement to use the flattering term, "I'm goin' back down there. Not jumpin', you understand, but walkin'."

Then, at the returning frown of denial in the captain's eyes:

"I licked 'em at Times Square, you know. Ultra-violet lamps. I want the best available. Get 'em here for me. Remember all those prisoners they lugged past? I may be able to free 'em—if we work fast. Get me lamps, as many and as powerful as you can, and miles of cable. Extension cords that will couple together and let us advance. God alone knows how far."

The movement of the termanites scurrying back into their caverns was undoubtedly hastened by the approach of the killing lamps up the spur. By the time Edwards had convinced the captain that his plan was feasible and they had collected lamps and cords, the weary men walking up the tunnel over the bodies they had slain drove the last scurrying termanite down into the hole.

"I'm asking for fresh volunteers," called Edwards, fortified by more hot coffee yet weaving with weariness where he stood. "You all saw what these men did to 'em with their lamps. I'm asking for volunteers to go on with me into their caves after 'em, to see if—if we can free any of the prisoners they carried off alive. Who'll go?"

There was an awful silence. Strong men grew pale. Callow youths shuddered and drew back. The police captain shook his head commiseratingly.

"It's too much to ask," he muttered. "A body might stumble and disconnect the cords, or some of them devils might sneak up behind and kick 'em apart—and then where are you?"

A white faced man who had been standing staring dumbly down into the hole lifted a face, drained of hope. His great solemn eyes rested on Edwards.

"Wh-where you goin'?" he asked suddenly, his voice cracking like a whiplash in the sudden silence.

"Down there to see if I can free any of the prisoners—before it's too late."

The man sidled forward, moving like a revived ghost. His great eyes were pathetic in their staring.

"I—I—could I go with you?" he whispered. "My—my—," his voice had a sob in it that he could not down. It broke into a shrill scream, "They got my wife—carried her down there—screamin' to me to help her. L-let me at 'em."

A big man with a red face pushed through until he faced Edwards. "I know Joe, and I knew his wife," he said quietly. "They live up by the fire station. His kids play around."

He turned, his own eyes swimming, and looked out over the mob. "What do you say, boys?" he called. "Who's goin' with him?"

There was a lusty roar. The firemen crowded forward. Eager hands reached for lamps and cord.

The rest of the crowd raised a cheer as they con-

nected up and went swinging down into the unknown caverns whence the horde had come.

CHAPTER IV

Into the Termanite Caves

THE jagged hole where the compressed air and the drilling had broken through into the natural cavern beyond gave downward into pitchy depths. But the powerful beams of the ultra-violet lamps bored into that darkness and displayed a sloping floor leading away some thirty or forty feet below. Loitering at the bottom, to kick and lunge and tumble at the touch of the beam, were remnants of the invading horde.

Sick with the sight of so many dying and dead, Jerry Edwards steeled himself and then swung over on the rope. Lowered by eager volunteers from the local fire station, he preceded the other members of the company, to bore that beam of death down the slanting passage at the scrambling termanites that seemed to sense the threat and go scuttling in terror before them.

One worry, obsessed Edwards when he started the descent. The core drillings for the subway project had found no record of the caverns. It had not gone as deep as this slant, to be sure, so that even extensive caves or chambers might exist far underground. If the space beyond proved as extensive as he assumed it must be to support so many termanites, the daring little company of invaders might well worry about finding the prisoners, either dead or alive. But there was no need to worry about that as long as their course led down a single corridor.

The trail was evidently a fault caused by the slipping of the rock many centuries before. At its maximum height, it allowed passage of the tallest man in the company, but it grew shallow swiftly on both sides, so that a cat would have found difficulty crawling along fifteen feet on either side of the center down which they hurried as fast as they could reel out the cords, connect up, and send the beam of at least one lamp ahead of them.

They had barely begun the descent before they heard a shout behind them and paused to discover what was the matter. The beam of a flashlight cut through the gloom back there, and a shrill voice piped, "Wait for me, will you? I'm from the *Flash*. Looking for Miss Cartwright. Don't leave me behind."

Edwards grinned and nodded to the others to wait. He knew that pip-squeak. It was Charlie Emmet, the fat little photographer who often went with the missing girl reporter when she needed pictures.

"Whew," he puffed maturing out of the gloom as if by the assistance of a genie, "you guys sure are in a hurry. If you had to pack an outfit like this, you'd slow down."

Edwards frowned. The man was loaded with his full equipment for picture taking. The big camera was slung in readiness around his neck; a leather bag

was slung around his neck to slap and pound against his side, evidently with plates for re-takes; and he carried a flash bulb in its shield in one plump hand.

"This is no advertising stunt for the *Flash*," snapped Edwards. "We're down here to try to save human lives."

"Yeah, but you gotta save mine, Mister Edwards. The boss told me he'd cut my pay if I didn't get pictures of the underground homes of these things. Think what it would do to the circulation. BEAUTIFUL GIRL REPORTER ABDUCTED! FLASH SENDS PHOTOGRAPHER TO LAIR OF TERMANITES FOR INTIMATE GLIMPSES OF THEIR HOME LIFE. I'll get you into it, Mister Edwards; give you a big play."

Edwards lashed out at him so savagely that the plump little man surged backward, stumbled, and fell sprawling.

"This is a humane relief job, not a circulation boost for that rag," he snapped. "Come on, men. Let him look out for himself. We've work to do."

He had hoped that Emmet would be discouraged by their speed and head back, but he kept on after them. On and on they strode as fast as they could go. The rocks were not easy to negotiate, especially by men unreeling extension cord from their shoulders as they went, or carrying lamps and being careful not to crash with them.

Every step was a nightmare because the termanites were always in evidence just beyond the rays, skulking before them, or crumpling in kicking huddles to thrash out their remaining life in scalding pain when touched by the beam of the lamp.

Then the fault led into a mighty cavern which stretched away indefinitely.

EDWARDS gasped at what he saw before him. Tier on tier of soil was built up in floors supported by some substance that closer inspection proved was a paste of earth and some hardening agent that made the uprights equal to man-made concrete in strength. On these tiers acres and acres of odd fungi spread away in every direction, evidently the principal source of food supply for the pale termanites before they tasted human blood.

Down the center of the great growing beds, for such they plainly were, ran a corridor broad enough for the rescue group to proceed without danger of being attacked by surprise. Edwards led, sweeping that powerful beam from side to side, bringing searing death to the smaller termanite figures that were evidently engaged in some kind of labor over the various types of mushroom growth.

Remembering that he had read somewhere that a good general hesitates about leaving his flanks exposed, Edwards worried about those hordes of younger, smaller termanites that must be hidden away at the back of those mounting tiers of beds. To hunt them down and bore the rays of the beam at them would necessitate hours of climbing up structures built

for the convenience of those sucker plates rather than human hands and feet. Days would be lost seeking the remote corners of the great growing areas.

He knew that the creatures might come out and bite off the vital line that fed their lamp electricity, might accidentally kick or jerk at the line and disconnect any of the many jointures. The rescuers might be plunged into darkness that would spell horrible death at the hands of the horde at any instant.

But they must take the chance. If any of those prisoners were still alive, the rescuers must not loiter in their quest for them.

Down the long corridor they plunged. The light swept from side to side, up the tiers that towered layer after layer far above them, then ahead again, then about and up. Diminutive termanites squirmed and wriggled and plunged to their death on every side. The corridor became a walk of death, lined by the faintly phosphorescent bodies of the dead, which glowed even sharper in death.

"You boys realize what this means, don't you?" asked Edwards grimly, halting while his comrades gasped for breath and the shuffling, panting figure of Emmet limped up.

"Yeah, I do," piped Emmet. "It means you guys'll have blisters too if you don't slow. You can't afford to take such chances with your health. There's no knowing what this atmosphere may have in it. Probably lacking in oxygen. Even if it isn't, there might be deadly gases. Or a guy could die from a simple blister on the heel."

"You, or that other heel, your boss?" asked Edwards sharply.

"Listen," grinned the red faced fireman, "we know there's a chance some of them goonies will crawl out of their crevices and burn our bridges behind us, but we're in this thing to see it through, if that's what you want to know."

Edwards nodded appreciation and went on. Again that beam shed death about it as the delicate skins of the termanites turned red and blistered under its touch, seeming to set up a seething within their cold bodies of the watery fluid that served them as blood.

Suddenly there came a weird sound of clashing ahead of them, a mighty noise that fairly shook the tiers of growing beds with its echo. Then, far ahead of them, but dimly caught in the rays of the lamp, there loomed a yet more savage looking array than they had yet encountered.

These evidently were the real warriors of the termanite civilization. Slightly larger than their worker confederates who had swarmed into Manhattan's subways, these were equipped with savage claws instead of suction discs at the ends of each finger. Their eyes were larger, their antennae longer and more numerous, and their whole aspect carried more assurance than did that of the other termanites.

At that instant the small creatures on the tiers of beds decided to rush the invaders. Down they came swarming, their smaller bodies gleaming, their little

jaws clacking and clashing.

Edwards gave them sweep after sweep of the lamp beam. Their bodies seared and broiled. They tumbled and fell in ever mounting piles. Yet more and more of them plunged out and started the descent to death.

In his grim determination not to be bested on either flank, he swept that lashing beam of light up and down and up again in a never ceasing series of swings. Meanwhile the fighters were advancing more rapidly than he realized, their huge eyes equally as sightless as their comrades' but their antennae more acute and their speed correspondingly greater.

"I wonder if them rays will knock these fighter things for a loop too," one of the firemen worried aloud. "Hadh't you better give 'em a shot and see? They're gettin' close."

The last words brought Edwards about with a jerk. In his consternation at seeing the formidable scrapers bearing down upon them at such close quarters, he nearly fell. With a mighty sweep of the lamp in a floundering effort to regain his precarious balance, he

inadvertently jerked a connection loose, plunging them into instant darkness.

Then their eyes became accustomed to the gloom. Illumined faintly by the glowing bodies of the dead termanites, they grouped in a terrified body and waited for those clashing things to reach them.

Jerry Edwards alone had presence of mind enough to go groping in quest of that yanked connection to try and repair it, but the effort was plainly useless. It was only a matter of seconds before the fighters from before and the younger termanites from the sides would be upon them.

Jerry Edwards groped and prayed. A fireman cursed loudly. Another started repeating the Rosary in an awed voice that sounded weird in those awful chambers.

"They're on us," screamed the almost demented husband who had first volunteered.

Suddenly the entire cavern burst into a flame of light as a mighty report echoed and re-echoed back among the tiers. The firemen sprawled and groveled in abject terror, certain that this was the end. The



THE ENTIRE CAVERN BURST INTO A FLAME OF LIGHT AS A MIGHTY REPORT ECHOED FROM THE WALLS LIKE AN EXPLODING BOMB

advance of the warrior termanites halted. There was no noise of any kind audible except the dropping of bodies from the tiers whence they had been crawling by the hundreds to finish the invading human beings.

THEN Emmet's cackle of laughter cut through the ringing echoes and the awed silence.

"I thought them flash bulbs with special ultra-violet riggings might come in handy," he grinned, holding his flashlight and sending its beam to discover where the cord had pulled out at the nearest connection.

Edwards caught up the cord and plugged it in. The strong beam of the lamp flooded a scene of carnage. That single flash bulb, loaded with the ultra-violet ray as was the beam, had wrought destruction. The warriors had proved as susceptible to the rays as had their white fellows. They lay as they had fallen, in twisted ranks where they had writhed in agony as the ultra-violet scorched and seared their vitals and set their juices to boiling.

"Thank God you came along, Emmet," gasped Edwards. "From now on I'll let you live, even if I do hate your sheet and its methods of getting copy. You, at least, have proved your usefulness."

They finally passed out of the beds, but came to an equally intricate series of cells that towered high over them. Each cell was loaded with what looked like large balls loosely covered with a thin membrane. Stalking among these, rolling them over as tenderly as an incubator tender turned the hatching eggs before automatic turning handles were devised for hatcheries, were more full grown termanites.

"These must be their young," grunted Edwards. "They must come in egg form and hatch. The things are an odd cross between man and insect in more ways than one."

They went on in awed silence past tiers on tiers of eggs of varying sizes. Then, suddenly, the deathly silence was split by a scream that started from a single throat, seemingly, and then burst from hundreds. Wild, hysterical, a strange mingling of terror, hope, and maniacal despair, the odd wail echoed and re-echoed until the very bins and racks and tiers seemed to be spewing the sound forth.

Suddenly the dazed little man who was searching for his wife leaped forward. Quivering with relief, he plunged beyond the sweep of the lamp to rush at an almost concealed opening, where a veritable grillwork of the odd termanite concrete barred the way. Beyond that grill human figures were packed in frantic appeal against the barrier, crushing, surging, screaming, entreating to be saved.

Then, looming like a prehistoric monster out of a mighty chamber near that barrier, something grimly horrible snorted and heaved. An enormous head with sightless eyes filmed, with mighty mouth yawning, with antennae waving, thrust out to bar the little man's way.

With a scream of defiance he leaped straight at it, evaded the great cutting blades of the mouth which

must have sliced him in two, and began hammering viciously at one of those great sightless eyes.

He had evidently picked up a jagged chunk of rock as he started forward, for he was delivering telling blows, even as Edwards swung the lamp into play.

The monster squirmed and wriggled and oozed a great repulsive body out to almost bar the grill, even as the head lunged in vain in an effort to evade that hammering on the sensitive eye. Great limbs writhed after the diminutive man whose courage was so superb.

Edwards bored the full force of the lamp at that horrid head, running forward to pour stronger and stronger rays into the great hulk. Emmet lifted his arm high in air and exploded another ultra-violet charged bulb. The caverns echoed to the din.

THE ugly body began to withdraw. The great head flinched and fell back. Quaking with evident terror, the monster sought to retreat into its den, but the deadly effects of the rays had bitten deep into its life stream.

Suddenly the whole mass began to thrash about as violently as the small termanites had thrashed in dying. The flesh, seared a lobster red under the rays, burst out with mighty blisters. There was a sound of bubbling within the great arteries as the fluid that served it as blood responded to the influence of the ultra-violet charge the head and body had received.

The little man was flung back against the wall, but he lifted and hurled a rain of rocks at the dying beast. Then, weak from his exertions, he staggered toward the gratings, ignoring the thrashing death struggle of the monster.

"Mary," he screamed, his voice high and shrill, "Mary, be you there? It's Joe come to get you."

There was a sob of relief behind that barrier. A woman's shrill voice rose above the clamor of the prisoners. "Here I be, Joe. Let us out of here. I knew you'd come."

Jerry Edwards was suddenly beside him. His voice too lifted above the frantic clamoring of those poor creatures that had thought themselves lost.

"Kate Cartwright, are you there? Kate, are you safe?"

"She's back with her mother, if you mean that newspaper woman," roared a man. "Her mother's too weak for this press. She's okay. Her mother's a bit shook up, but livin'."

For Jerry Edwards the world was suddenly bright in spite of the gloom and horror of those caverns. He sprang forward with a great chunk of jagged rock in one hand and began battering at the grillwork.

The termanite cement proved too hard for the rock, which shattered under the hammering. But others were hurrying to smash heavier and harder rocks against the mixture, which began to crack under the barrage. Soon it crumbled enough so that strong hands yanked away a segment of the grill.

A man thrust his head out, risking being brained by the uplighted rocks, and forced himself through.

A blow that could not be halted, crashed down on his hand, smashing two fingers, but he hardly seemed to notice it in his enthusiasm at being freed.

But Jerry Edwards was incensed at the pushing, shoving, and crowding behind that barrier as men fought women back and women yanked at the hair of other women before them in a mad struggle for freedom.

He swept that beam of light away from the mob and back along the route they had come. As he had expected, the termanites were barring their way in a packed and inquiring mass. Although the front ranks dropped before the beam, it was evident that there were hundreds, perhaps thousands, more behind.

An awed silence fell over the prisoners. Their frantic desire to escape from the pen where they had been held for the future feeding of the monster queen-mother of the hordes was seasoned with awed fear of what lay beyond that little island of light in those subterranean chambers of horror.

"Listen," called Edwards, "we came down here to free you people, if possible. We don't expect any mad riots. Remember that you are men and women. The old law of the sea goes here, the law of real men everywhere in time of danger. Women and children first. Stand back, all of you, until we smack this hole bigger. Then you men in there help the women and kiddies out."

He begrudged every instant of precious time wasted, for he knew that at any instant those crowding things in the corridor behind might disconnect the wire that made life possible for them. He was aware that cold sweat was coursing in rivulets down his weary body as he renewed the pounding, considered the hole large enough for a safe and hurried exit, and then started the women and children to coming out.

Meanwhile he had suggested that Emmet aim his flash bulbs back at the horde of termanites still crowding to be at them and blast as many as he could into eternity in that fashion.

SWIFTLY, like an army officer, he lined up the terrified remnants of the captive group. There would be time enough to learn later of the horrors they had undergone, of the decimation of their ranks for the purpose of feeding the monster that they must now crowd past to reach safety. Now every effort must be bent to get them back to the surface before their last bit of strength was spent.

Kate Cartwright came out last of the women, helping her little mother, who smiled bravely at Jerry Edwards.

"I knew you'd come," she laughed over the tears, hysterical with relief. "I told Kate you would. I'm proud of you, my boy." She bent closer and her eyes twinkled in the faint light. "And so's my Kate," she whispered hurriedly.

Edwards watched the men come filing out. Swiftly he counted them off, assigning the strongest of them to help the women and children, warning them all to remain in a compact body as they retreated.

Emmet stalked ahead, blasting their way with his flash bulbs as long as they lasted. Behind him came a fireman with the lamp sweeping away the remnants the bulbs had missed. On one side of him, careful to keep clear of the electric cords for fear of disconnecting them, huddled the rescued and the firemen who were helping the weaker ones along.

Behind, coiling up the cord and carrying it on their shoulders, were the strongest of the men who had volunteered.

Jerry Edwards had given all the necessary orders and now lapsed into the background. Tired as he was, he more than half supported the older woman, while Kate Cartwright, admitting her feminine weakness at last, hugged tight to his other arm and telegraphed to him at every step with every tingling nerve in her body how proud she was of him for what he had done.

Thus the little company straggled out and up, to be hoisted through the gaping opening at last and to pass upward to the surface, where relatives and friends had been keeping up a long, long vigil for their return.

"Gentlemen," boomed the delighted little mayor, "New York is proud of you. America is proud of you. As long as such courageous souls live, this country shall know no real defeat."

"Just the same," said Jerry Edwards grimly, jerking his head toward that hole from whence they had just straggled, "they can't block that hole up any too quickly to suit me. I'd suggest dumping tailings into the place and pouring concrete over every ten feet of rock, just to make sure any survivors stay down."

The mayor nodded, only to be brushed aside by the plump figure of Emmet, who squirmed and wriggled his way forward, his camera focused at his chest.

"Just hold it," he called. "You and Miss Cartwright, Edwards, with Mother Cartwright on one side giving her blessing and the mayor on the other. This'll complete the series of pictures and give a touch of human interest and romance to it all."

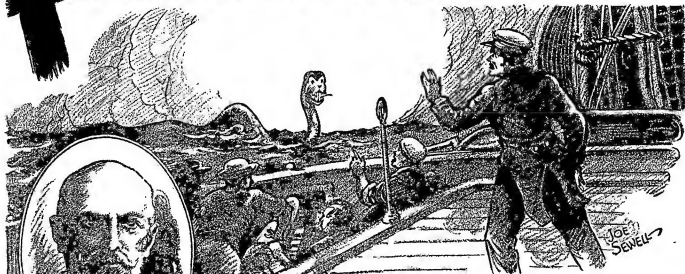
Then his face lost its cherubic grin. Horror paled his cheeks, allowed his mouth to gape open, popped out his eyes. One frantic fat hand groped at the bag of plates at his side.

"Twenty exposures!" he gasped. "Twenty beauts, including that little cuss pounding out the monster's eye with a rock—and every one of 'em—every last blasted one of 'em—exposed on the same plate."

"That," grinned Edwards, looking about for a taxi, "is okay by me. And lay off shooting any more pictures of Kate and me, or you'll have no camera left to shoot with. This, ladies and gentlemen, is going to be an absolutely private wedding—no tabloids allowed."



Fantastic



VARIOUS STORIES OF GIANT SEA SERPENTS ATTACKING SHIPS NEAR THE NORTH AMERICAN COAST, APPEARED IN THE NEWSPAPERS OF BOTH THE UNITED STATES AND ENGLAND DURING THE EARLY 19 $\frac{1}{2}$ CENTURY.

Dr. ALBERT C. KOCH, WHO IN EARLY SUMMER, 1845, EXHIBITED ON BROADWAY IN NEW YORK, A LARGE SKELETON HE CLAIMED TO BE THAT OF A SEA SERPENT . .



MANY NEW YORKERS PAID TO SEE THIS FOSSIL WONDER AND LISTENED TO THE BARKER'S GRAPHIC DESCRIPTION OF ITS FANTASTIC ORIGIN AND DISCOVERY. THE SKELETON WAS LABELED **HYDRARCHUS SILLIMANNI**. IT WAS 114 FEET LONG.

*P*ROFESSOR WYMAN, AN EXPERT ZOOLOGIST AND ANATOMIST, AFTER A CAREFUL EXAMINATION, STAMPED THE EXHIBIT AS A HOAX. HE PROVED THAT THE SKELETON WAS MADE UP OF BONES FROM TWO DIFFERENT WHALES. THIS FINISHED KOCH'S EXHIBITION IN AMERICA - ALTHOUGH HE LATER SHIPPED THE FOSSILS TO GERMANY AND EXHIBITED THEM IN BERLIN.

HOAXES

By WILLY LEY

Dr. Koch's Sea Serpent Hoax excited the people of 1845 and he very successfully exhibited his fraudulent reconstruction of *Hydrarchus Sillimanni*, as he called it, as the real thing and drew from it a quite handsome personal revenue in New York

ILLUSTRATED BY JOE SEWELL

ONE of the most typical Sea Serpent stories, to my mind, is the one contained in a letter written by Mr. William Warburton on September 20th, 1826, to the editor of the *Edinburgh Journal of Science* in which publication it was printed in volume VI. for the year 1827. In this letter Mr. Warburton related with doubtless sincerity that he, while travelling from Liverpool to New York on the ship *Silas Richards* which arrived in New York on June 15th, 1826, saw what he described as a Sea-Serpent, seen near "George's Bank" five days prior to arrival in America.

The psychologically important part of the letter, however, is not the description of the still mysterious "Sea Serpent" (the existence of which is still neither conclusively proven nor disproved) but a short passage that reads as follows: "I immediately called to the passengers, who were all down below, but only five or six came up. The remainder refused to come up, saying there had been too many hoaxes of that kind already."

It is quite possible that several of these reluctant passengers that refused to look at a rare occurrence even though it presented itself conveniently saw a Sea Serpent a number of years later. It was only a dead one, to be sure, but of awe inspiring dimensions that could be inspected at leisure.

In early summer 1845 one "Dr." Albert C. Koch exhibited on Broadway in New York a large skeleton of a fossil animal. The skeleton was labeled *Hydrarchus Sillimanni* and "Dr." Koch claimed that it, although extinct, was most certainly related to the "Sea Serpent" of our present time, probably being one of the ancestors of the present group or family.

The skeleton certainly looked that way. It was 114 feet long, definitely of serpentine form, consisting mainly of a long row of vertebrae with a small head, a number of short ribs and incomplete paddles. It was mounted in the typical position familiar to "Dr." Koch from many Sea Serpent reports, resting in a slightly "wavy" position with reared up head.

Many New Yorkers came and paid good silver pieces to marvel at the fossil wonder, listening to Koch's explanation that this was certainly an ancestor of the reported Sea Serpents and that a study of the fossil remains might shed some light on the identity of the present day undiscovered monster. Unfortunately for "Dr." Koch one of his visitors really studied the fossil bones. The name of this visitor was Wyman and he happened to be an expert zoologist and anatomist. And he soon published an article in the *Proceedings of the Boston Society of Natural History* (November Issue 1845) proving that "these remains never belonged to one and the same individual, and that the anatomical characteristics of the teeth indicate that they are not those of a reptile but of a warm blooded mammal." Professor Wyman also succeeded in discovering what fossil animal had furnished the bones, it was Zeuglodon, an extinct distant relative of the present day whales. "Dr." Koch had stated—truthfully, for a change—that he had collected the bones in Alabama where remains of Zeuglodon have actually been discovered repeat-

edly. Professor Wyman believed that two individuals of Zeuglodon had been pieced together, that was, as was found out later, an understatement, Koch had strung together as many Zeuglodon vertebrae as he could find. After his hoax had been exposed he packed his *Hydrarchus Sillimanni* in solid wooden boxes and shipped them to Dresden. But his glory did not last long there either, the fraud was exposed again. And in addition to all that the famous British paleontologist Gideon A. Mantell shed some light on "Dr." Koch's past in a letter published by the Illustrated London News. After having explained how the Broadway skeleton had been manufactured—to be taken literally: "made by hand"—Mantell continued: "Mr. Koch is the person who, a few years ago, had a fine collection of fossil bones of elephants and mastodons, out of which he made up an enormous skeleton, and exhibited it in the Egyptian Hall, Piccadilly, under the name of 'Missourium.' This collection was purchased by the trustees of the British Museum and from it were selected the bones which now constitute the skeleton of the Mastodon. . . ."

While Mr. Koch's Sea Serpent hoax, though impressive, was rather short lived, another earlier Sea Serpent Hoax had a long life.

Shortly after the Linnaean Society of Boston had been busily collecting eye witness reports of the so-called New England Sea-Serpent of 1817 until it was proved beyond a doubt that something strange and unknown had been swimming around near Gloucester and Ann Harbor one Captain Joseph Woodward—he was probably just as much of a captain as Koch was a doctor—came with an exciting but regretfully insincere Sea Serpent yarn.

He claimed that in May, 1818, his ship, sailing in New England waters, suddenly encountered a huge Sea Serpent. When it appeared it was about 60 feet away from the ship and came closer with astonishing speed. They fired a small cannon ball and a number of musket bullets against the monster and heard them strike, but the animal moved on unaffected. "Captain" Woodward caused his cannon to be loaded again, but before they fired the shot his men became badly frightened and ran away from the loaded cannon to seek shelter. A crash between ship and Sea Serpent seemed inevitable, but "Captain" Woodward succeeded in tacking so as to avoid the animal that afterwards continued to pursue them for five hours!

Now if there ever was a story that has the word "hoax" spread all over its entire length it was this one. But, strange to say, it met with much more success than dozens of simple and sincere reports. After being published in several Boston and New York newspapers it was reprinted by the *Quarterly Journal of Science, Literature and the Arts of the Royal Institute at London* (in vol. VI, 1818), then in Oken's "Isis" and again, thirty years later in *The Zoologist*, (1848) without mentioning the source. From there it was translated into German by Forster for his journal *Notizen* and it might have proceeded to haunt newspapers and journals if W. W. Cooper had not taken the pains to examine its internal evidence and to expose it as a hoax.

The Prince of Mars

I, CAPTAIN DANIEL J. HANLEY, chief meteorologist of the General Rocket Corporation, had no intention of going to Mars when I stepped into the new space car and pressed gently but with finality on the gravity-screen lever.

I was conscious only of a great urge to get as far away as possible from a certain young woman who had —But why go into details about that? It is enough that I didn't fully realize what I was doing.

And as a result, here I was, the first man ever to pass beyond the stratosphere of Earth, actually hovering a scant mile above a Martian landscape, trembling with suppressed excitement and giving not a thought to the girl who had driven me to my mad, premature plunge into space.

I faced infinity with reckless abandon, and found that I liked it. What mattered it if the end did come in a day, week, month? Why, there were no days, weeks or months in interplanetary space! Only eternal, blazing noon on

one side of my tiny craft and everlasting midnight on the other, while countless galaxies gleamed upon me in new glory from all sides.

That I landed on Mars instead of some other planet was due solely to chance. In hurling my tiny craft madly, blindly away from Earth I happened to set it on an orbit that brought it closer to Mars than to any other heavenly body. As I drew nearer, the planet grew in size and in interest, until it entirely filled the great lens of my wide-angle scope. Its mountain ranges and peculiar canals became plainly visible.

I manipulated my rocket blasts a bit and swung closer. There was no indication that the canals were man-made. Rather they seemed furrows caused by glancing blows of meteors. And there were many craters which, though small, like those of the moon, appeared to be the result of head-on meteoric impact.

As the planet grew still larger, I could see that there were no oceans and continents in the sense that we

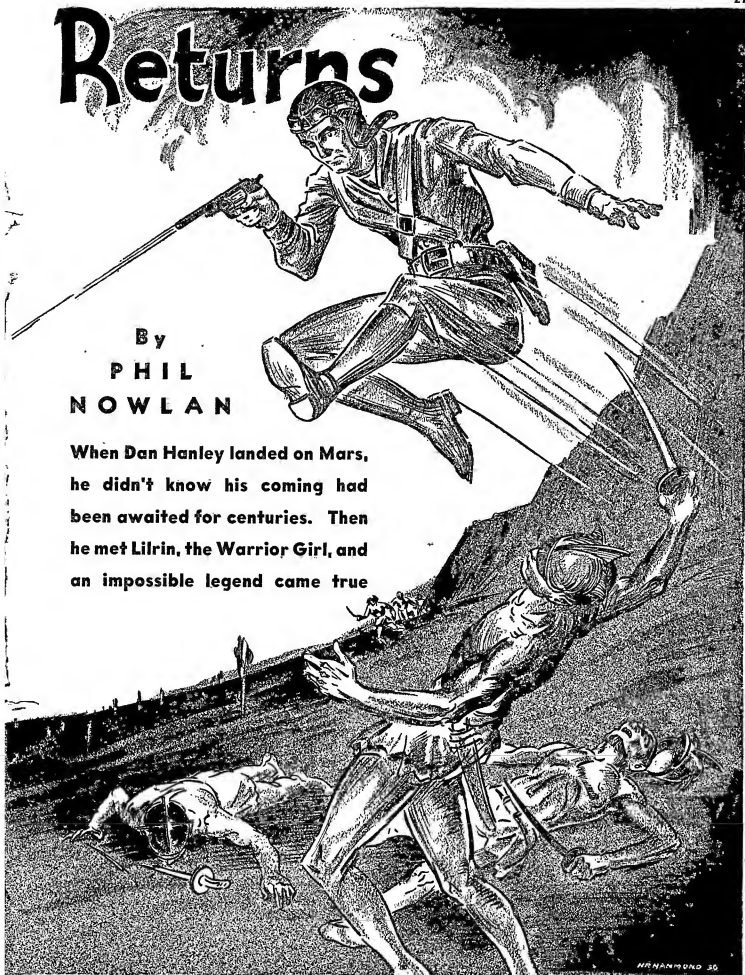
HANLEY'S GUN ROARED AS HIS LEAP CARRIED HIM HIGH OVER THE HEADS OF HIS OPPONENTS



Returns

By
**PHIL
NOWLAN**

When Dan Hanley landed on Mars,
he didn't know his coming had
been awaited for centuries. Then
he met Lilrin, the Warrior Girl, and
an impossible legend came true



know them on Earth. Nevertheless, the divisions between the ice caps, polar seas, solid vegetation belts, canal-irrigated sections, and finally the vast and eternally dry, red equatorial belt, were clear and sharp. The northern and southern hemispheres, widely divided by this belt, seemed duplicated.

"Why not inspect the planet at close range?" I asked myself.

So here I was, easing down over a countryside such as no man of Earth had ever seen.

Through the forward port I gazed upon a country of scrubby, dwarfed, cactuslike trees and shrubs, stretching away drably to where a ribbon of water—one of these much-discussed "canals"—sparkled. To my left, toward the equatorial belt, the vegetation became more dwarfed and sparse, until its pale, yellow-green blended into the deeper, reddish tint of the arid desert.

To my right a rolling plain swelled into distant hills, heavily covered with the yellow-green foliage. On the horizon, a range of gaunt, jagged mountains flashed and shimmered like crystal in the pale, cool sunlight.

"Quartz!" I muttered. "They must be pure quartz!"

I brought my craft gently down on the bank of the little "river" that meandered along the "canal," or valley. With trembling fingers I opened the valve of one of the test chambers and watched the pressure gauge.

I had feared an uncomfortably rare air, but the gauge registered a pressure no less than that of mountainous regions at home. There was more carbon dioxide and more hydrogen, but the oxygen content was about the same as on Earth! I could leave my little metal shell and walk around on a new planet!

Excited, I threw back the hatch at the top of my little hemispherical craft and leaped out joyously. I landed, not where I expected, but fifteen or twenty feet beyond. I had forgotten that I would weigh only about a third as much as on Earth.

But with a little practice, I found I could gauge my muscular effort instinctively to the desired distance. It was a delightful amusement, leaping twenty-five or thirty feet with the effort of an eight or ten-foot jump. But finally I gave some consideration to my position.

"And now," I told myself, "here I am on an utterly strange planet. I have no idea what dangers I may have to face. I don't know whether intelligent beings live here or, if they do, what their attitude toward me might be. It might be just as well to have an 'ace in the hole.' I'll hide my ship, mark the spot well, and then if by any chance things should get too hot for me, I'll have the means in reserve to do a fade-out."

I studied the banks of the stream. Obviously the little river was at high-water mark. That was good. There would be no more powerful current than this to wash my ship away, then, for it was my intention to sink her in the middle of the stream.

Again I climbed aboard, closed the hatch. Letting my space car drift a few feet above the water, I maneuvered over the center of the stream and then submerged. The ship went about ten feet below the surface. I had previously unloaded the equipment I meant to use, so nothing remained but to put everything in order, enter the airlock, adjust the pressure, and dive down and out through the port.

I realized, as I donned my woolen shirt, leather breeches and puttees, that the sun did not shed as much warmth on Mars as on Earth. It seemed scarcely more than half the size to which I was accustomed. As I rolled up my blankets, I had little doubt I would need them after nightfall.

As yet I had seen no sign of animal life. But there were many spots on Earth where a visitor would find none for miles. So that proved nothing. I strapped a heavy automatic to my thigh, clasped on a cartridge belt. As an extra precaution, I slipped a smaller automatic in a shoulder holster which I put on under my shirt. For the rest, I thought, my hunting knife and short-handled axe might prove serviceable.

MARKING the position of my submerged spacecraft by carefully sighting the distant mountain peaks on crossed lines, I shouldered my light pack and hiked toward the gleaming, flashing mountain range.

It was glorious to weigh no more than about sixty pounds, and yet have muscles that had been accustomed to carrying one hundred seventy. Walking did not give them the exercise they demanded after the long period cooped up in the little space ship, so I ran with exhilarating lightness, practicing long and high leaps as I went and shouting at times from sheer, unrestrained joy.

I had gone about five miles when I first saw her.

The scrubby undergrowth had given way to another cactuslike type of vegetation, the trees of Mars, slim and tall with stubby, blunt branches. They bore no leaves. Rather, both trunks and branches seemed to be leaves in themselves: pale yellow-green and semi-transparent. A thin syrupy sap ran freely from one which I scored with my axe.

The sudden flash of a movement somewhere ahead of me arrested my eye. Abruptly I halted, standing motionless, alert. I saw nothing but the yellow-green trees. I shifted my axe to my left hand. Quietly my right fist rested on the butt of my automatic. I advanced, poised for instant action.

From somewhere ahead came a metallic twang. I ducked. A heavy missile thudded into the trunk of a tree directly behind me. Then a girl stepped confidently forth, about twenty feet away.

Evidently she thought she had hit me, for her first reaction was to start back at the sight of me standing there. Hastily she dropped the four-foot tube she held in her hand, and in something like a panic tugged at a kind of quiver or sheath slung across her shoulder, until she held another tube pointed straight at me.

For some moments we stood motionless, gazing at

each other in amazement.

I had rather expected to find life of some sort on Mars, and was even hoping to find intelligent creatures of some sort. But to find a pretty, golden-haired Amazon, in green kilts, soft leather leggings and loose, sleeveless blouse that did not by any means conceal her slender form—well, that took my breath away!

CHAPTER II

Lilrin of the Ta n'Ur

AT last the significance of that tube, pointed at my chest unhesitatingly, broke through my stunned thoughts. I dropped my axe, held out my empty hands in a gesture of friendliness.

"Can't we be friends?" I smiled, knowing full well my language would not be understood, but hoping that my tone might.

Her reply, uttered in a soft, euphonious tongue, was obviously a question. And feeling a bit foolish, I tried to indicate by gestures that I could not understand her.

For a moment she watched me. A quizzical look crept into her green-blue eyes. Then she laughed and lowered the tube a bit, but quickly covered me again as I stepped forward. She was taking no chances, it seemed, for again her eyes flashed a warning as I sought to recover my axe.

She motioned me back. As I complied, she walked over and picked up the axe herself, never taking her eyes off me. Next she motioned toward my knife. I tossed it at her feet, and she picked this up also. The automatic strapped to my leg meant nothing to her, seemingly. She did not demand it.

Feeling safer now, she stood back and surveyed me speculatively. At length she motioned me to precede her in the direction of the distant mountains. This I did willingly enough, for I felt that with my two guns I could always command the situation, even if her people did not prove as friendly in their attitude as I hoped.

I had been eying those tubes she carried in the quiver, and had come to the conclusion, both from their appearance and their peculiar, twanging, metallic quality, that they hurled their bullets by the force of a coiled spring.

As I marched on, occasionally turning to look at my fair captor, the vegetation became thicker, and the hills and ravines more pronounced. Coming to the top of one of these ridges she called out, and by gestures commanded me to turn sharply to the right. A bit later she paused and gave a peculiar whistling signal. This was replied to from some point ahead, and we went on.

I hardly know what I expected to see. It certainly was not the type of structure we finally came upon. Sheer walls of a glassy, translucent, solid material rose to a height of fifty feet or more. At least I judged them to be solid. I could see no joints or crevices.

There was a triangular opening. Through this peculiarly shaped gateway I strode on a pavement of material similar to the wall, which was worn smoothly and deeply as though by centuries of countless feet.

The space inside the wall, I saw, was diamond-shaped, about a thousand feet long and probably three-quarters that distance at its greatest width. The entire space was paved with a solid sheet of the glassy material, in which smooth troughs or channels had been worn.

In contrast with the solid and permanent nature of the walled space, which gave evidence of high engineering skill, there was no shelter inside except some two or three dozen tents, not unlike Indian tepees, of pale green leather over metal framework.

There were a score of men and women about, all garbed exactly like my captor: golden-haired, blue-eyed people of somewhat slighter build than the average on Earth, but otherwise remarkable only for the uniform perfection of their physique.

Men and women were of about the same height, none of them coming within several inches of my six feet. The men were only slightly sturdier than the women, and all seemed in perfect physical condition, like trained athletes. I did not see a fat nor a flabby individual among them.

Our appearance caused no great excitement, though a number gathered around us and my captor was questioned with mild curiosity. But they made way for us readily enough at her explanation.

Quite at ease now, she walked beside me, having sheathed her "gun," touching my arm occasionally to direct me toward a tent in the center, somewhat larger than the others. It was about thirty feet across, of a high, conical shape. A large translucent disc, set in the top of the metal framework, let in a soft light.

I don't know what she said to the blond-bearded man who sat at the carved, light metal table, but from her tone and the little gesture with which she called his attention to me, it must have been something like:

"Look what I found in the forest, Father!"

There ensued some rapid conversation in that peculiarly mellow tongue. Then to my considerable embarrassment they began to examine my apparel and myself with a critical scrutiny, finally motioning me outside where there was more light.

That they were both of them greatly puzzled was quite clear. At length the man, who seemed to be the head of the little community, endeavored to talk with me by signs. He placed a finger on my chest and looked questioningly at me. I guess I looked foolish, for I did not get him at first. So he pointed to himself.

"Ur Mornya," he said. Then he pointed at the girl and said, "Ur Lilrin."

"Oh," I nodded. "You mean those are your names." Then I pointed to myself and bowed.

"Dan—Dan Hanley—Captain Daniel J. Hanley, U. S. Army Reserve Corps, at your service."

"Danan-lih!" said the girl softly, as though the name was somehow both familiar and amazing.

Then Ur Mornya waved his hand generally toward the people scattered about the enclosure.

"Ta n'Ur," he said. From which I surmised that the "Ur" part of their names was a clan or community designation.

I smiled and put my finger on his chest. "Mornya," I said. "Ur Mornya."

He seemed a bit taken aback at the freedom of my gesture, but smiled his assent, if a bit wryly.

THEN I turned to the girl and, suddenly curious to see what would happen, placed my hand boldly on her shoulder as I spoke her name.

For an instant Mornya was about to lash out at me in fury. Lilrin's eyes blazed in indignant resentment. Then suddenly she blushed, and tried to act as though I had done nothing she thought unusual, while with a struggle her father strove to assume the same air.

Here was no race of barbarians, nor of slaves; but a people of high spirit, independence, culture, and quick intelligence. I sensed that I had committed a grievous offense, which was forgiven me instantly in view of my "ignorance." I sensed too that they must regard me somewhat in the light of a guest.

Some imp of perversity led me to puzzle them still further when, after a bit, they motioned me within the tent again, where a meal was laid out on the table.

I looked curiously at the unfamiliar viands—fruits and vegetables, most of which I had never seen. There was meat, and a fowl of peculiar shape. All of the tableware was of metal, a pale alloy that looked like gold but was not. The platters were inlaid with iridescent stones, and there were spoons, but no knives. My hosts used the blades which they took from the sheaths at their belts.

I made an apologetic gesture and went to my little pack, which had been laid in a corner. From it I took my silver knife and fork, and returned to the table.

They strove to conceal their curiosity, but finally stared frankly. It was on the fork that their interest centered. Not only its shape seemed unfamiliar to them, but the sterling silver itself. The girl watched my use of it with a kind of fascination, then actually blushed and giggled when I handed it to her.

Her father frowned and made another serious effort to question me by gestures. At last I gathered his meaning. He wanted to know whence I had come.

I pointed upward, toward the sky. His frown increased, and he shook his head. My explanation wasn't at all satisfactory, it seemed. Nor did I wonder at this. And the thought came to me then that it would be just as well not to try to explain. I wouldn't be believed. Who on Earth, say, would be believed if he claimed to be a Martian?

True, I might exhibit my little space-craft in substantiation of my story. But I did not know but that sooner or later my life might depend on keeping its

existence and its hiding place a secret. So I shrugged and let it go at that.

CHAPTER III

Giant Spider

NIGHT came. A new tent was erected for my use.

And when at last I tired of the glory of the two Martian moons which swung low and swiftly across the scintillating heavens, and Lilrin had given me a curiously speculative smile of adieu, I went inside and threw myself on the pile of soft skins and silks that evidently was intended as my couch. Almost at once I slept.

The days passed swiftly. Little by little I learned their language. It was hard pulling at first, but I had always had a certain facility with strange tongues. I learned something too of Martian life and history.

Mornya, Lilrin's father, was Myar-Lur—supreme chief—of the Ur, a clan of a race which, like the Cosacks on Earth, was somewhat nomadic in its inclinations, and jealously guarded its tribal traditions. Mornya with his seven Myars, or sub-chiefs, was at present in the service of the Northern Cities.

For five successive years the clan had contracted with the Northern Cities to guard the Desert Gap in the Quartz Mountains and the approaches to it.

The work of the clan had consisted chiefly in keeping the territory south of the Gap clear of the "dulyals," or yellow apes, beasts of almost human intelligence. These dulyals, I gathered, possessed a higher order of mentality than any of their counterparts on Earth.

They were tailless, walked erect, but had prehensile feet. They were covered with a golden brown fur, and though larger and more muscular than Martian men, were more human than apes in build. They were omnivorous, hunted in packs, had a rudimentary language, and fashioned crude clubs and spears.

Yet they were distinctly not human, Lilrin informed me.

"After two or three generations of captivity," she said, "they make excellent slaves. Unless they taste blood, they can be trusted invariably to be loyal to their masters. They bring higher prices in the slave markets because they are stronger and more docile than men—that is, the domesticated ones are more docile. About two-thirds of the city populations are dulyal slaves.

"You know," Lilrin looked up at me slyly, "the reason I tried to shoot you that day in the forest was because I thought you were a dulyal!"

We were sitting on an outcropping of rock, a great scintillating quartz boulder, gazing down a gentle slope toward the "canal." There was speculation, and it seemed to me a bit of suspicion, in Lilrin's steady gaze.

"Why do you look at me that way, Lilrin?" I asked. "Because I have dark hair, unlike your people?"

I thought perhaps she had not heard me, for she did

not answer at once. For several moments she mused. "Danan-lih, you are like no living man on this world!" she finally blurted out. Then just as suddenly she was all solicitude.

"I am sorry, I have no right to say such a thing. The ancient custom forbids anything that would make a guest feel uncomfortable. My offense is unpardonable."

That was my cue. "No it isn't, Lilrin," I protested. "You and your people have been so kind to me that an explanation is the least—"

"No, no!" she cried, jumping up and putting her hands over her ears. "I won't listen. You mustn't tell me anything. It wouldn't—"

A weird, shrill, wailing cry somewhere down the slope in front of us interrupted her. I'm not easily startled, but for an instant I felt a chill shoot up my spine. Lilrin stood an instant, rigid, motionless, staring pale and wide-eyed in the direction whence the sound had come.

"It's a birrok!" she gasped, tugging at the quiver in which she carried her bolt-hurling tubes. "Run, Danan-lih, run! You can't fight it without bolts, and even then you have to get it with the first shot, or—"

Then I saw the thing. It was a gigantic yellow-green spider. Its legs were fully twelve feet long. Suddenly it straightened them and the furry body, which had been resting close to the ground, rose as though on stilts. Clearly the thing sensed our presence and was looking for us.

Instantly those legs began to move with amazing rapidity. The body seemed to swoop down and glide swiftly toward us with an easy, undulating swing. It would be upon us in a moment. Instinctively I drew my automatic.

"Quick, Danan-lih! Run!" said Lilrin sharply, and stepped between me and the poisonous monster, her tube leveled.

There was a whir and a clang. The bolt shot true toward its mark. But with unbelievable agility, the great spider leaped forward.

Lilrin uttered a little cry of despair, and threw herself in front of me. I squeezed the trigger of my gun.

The shots blended into a roar as a succession of stabbing flashes leaped from the muzzle, for I emptied the whole magazine at the thing. As before, the beast leaped sharply to one side. But not quickly enough. The long legs crumpled up, and after one or two convulsive movements the thing lay still. At that, I believe it had dodged all but the first bullet.

CHAPTER IV

I Wed Lilrin

LILRIN recovered before I could make up my mind to leave her long enough to go down to the stream for water.

"Wh-what was it, Danan-lih—that terrible noise?

And you really killed the birrok? Impossible! How did you do it?"

I showed her the automatic, at which she gazed fascinated as I refilled the magazine. Then she looked up at me with her big blue-green eyes.

"You could have killed me just like that the day I shot at you," she said. "And I didn't have sense enough to take that machine-thing away from you!"

"Why, yes," I laughed. "Of course I could have, but I wouldn't—"

I broke off, for Lilrin did not join in my laughter. Instead there was a look of almost tragic solemnity in her eyes.

"You not only spared my life when I treated you as an enemy, but saved it as well from the terrible birrok. My life no longer belongs to me, but to you—to do with as you see fit, Danan-lih!"

She stood there, straight and slim and brave, her little jaws clenched in the effort to hold back the tears that would not be denied. Then she whirled away from me and broke into uncontrollable sobs.

I wanted to comfort her, but I was badly flustered. I knew nothing of Martian customs at all. This girl was as much of a soldier as the men of her clan. Did she mean that I had a right to command her military service, or were her words to be taken literally? Lord—was I expected to claim her as my wife!

"Lilrin," I said at last, and she swung around toward me with a pathetic little air of submission. "Come here and sit down again. You must listen and bear with me while I tell you who I am."

She nodded acquiescence, dabbing a bit at her eyes. She would not look at me. And that made it hard to begin. But somehow I managed it.

"If I only had half a dozen extra arms or legs, or something," I concluded, "there'd be some excuse for your believing my story that I just dropped down here from another planet. But here we are, with not as much difference between us as there might be between a man and a girl of two different races on Earth—or on Mars, I imagine.

"It's a wild story. But it's the truth, although I can hardly expect you to believe it."

"But I do believe it," she said gently. "I've seen your space ship. I went back and found it the day after I took you to our camp. I was curious about you. I found your footsteps coming from the edge of the water, and I swam out. I saw something under the water, and I dived. I did not know what it was, of course, but I knew it must contain the secret of where you came from and—and I was worried. But I didn't tell anybody.

"And I know what's worrying you now," she said, finally looking up at me with grave, serious eyes. "It's—it's me." She blushed frankly. "But we can't help it, Danan-lih, whether we like it or not. The law is:

"To him who has saved a life belongs that life and the service thereof," she quoted.

She breathed almost with a sigh. "It has been that way among the Ta n'Ur for untold ages, since the days when fire rained down from the skies, gouging great scars across the face of our world, drying up the ancient oceans and destroying the Old Civilization."

"But Lilrin," I protested, "I would not dream of embarrassing you, much less of making any claim upon you for what I did. I was saving my own life as well as yours. Besides, you might have killed the birrok with one of your own bolts."

"You can't get out of it that way," she said with a wan little smile. "It's the law. You saved my life. I belong to you. 'Ifs' and 'maybes' and 'perhapses' don't count here on Mars."

"Well," I said, "I can do with my property what I want, can't I? There's no reason why I can't give you back to yourself."

"Yes, there is. Because under the law, in a case like ours, it—means—it means—"

"Means what?" I had to ask, knowing the answer in advance.

"Marriage."

"But—but—" I objected. "Suppose I were already married."

"Then I would become your wife's slave," she explained unhappily. "And if I were already married, both my husband and I would become your slaves."

I didn't think much of that law. It seemed to have too many disadvantages.

"Do you mean to say," I demanded, "that if I were to save the life of your father, for instance, that he—the chief of your clan—would become my slave?"

"Oh, yes. That is, unless it were in battle, when all lives already belong to him anyway as commander-in-chief. In that event you could establish no claim on him. But if you were to save my father's life, as you saved mine just now, he—Myar-Lur of the Ta n'Ur—could never submit to the indignity of becoming a slave."

"But how could he help it! You say it is the law, and—"

"He would kill himself," she said simply.

"Oh."

For a long time we sat without speaking. I was trying to get a mental grasp on this strange Martian custom and the problem it involved. Lilrin sat dejectedly, gazing down the slope toward the undergrowth in which the dead birrok lay.

Then there came to me a thought in which it seemed there might be a gleam of hope. I put it up to Lilrin.

"I'm no Ur. Therefore the laws of the Ta n'Ur shouldn't apply to me," I argued.*

"Yes, they do," she insisted. "We're within the treaty boundaries of the Ta n'Ur. And even though

* This would be true if Captain Hanley were on Earth. Travelers in a foreign country, while subject to the civil and criminal regulations in that country, are still citizens of their own state. As such, visitors cannot be forced into any kind of contract—marriage is a contract—contrary to their rights in their own nation. Foreign governments having diplomatic relations with other states all subscribe to "international law"—set of customs which guarantees equal rights in commerce and the security of visiting citizens of another state.—Ed.

you are not one of us, you are subject to our laws."

"Well," I said in a clumsy attempt to comfort her, "I guess you do things differently on Mars. Anyway, we'll find some way out of it, Lilrin. So—"

"What's the matter?" she asked in sudden anxiety, for my startled expression must have revealed something of the sudden fear that assailed me.

"You—you wouldn't think of getting out of it by—"

"By killing myself?" She smiled sadly. "No. I don't want to kill myself. I want to live. I—oh—"

Without warning she burst into tears, and then began to laugh hysterically. She jumped up and started to run back to the camp, then paused and returned slowly.

"You wouldn't—you wouldn't run away, would you?" She was pleading with me. "Because if you did, they'd—they'd cast me out as a deserted wife!"

THEN she was gone, her slender little figure flashing in and out among the pale green stems of the forest as she ran back toward the camp.

It was a crazy situation, all right. But no crazier than the fact that I was on Mars. I pinched myself hard, winced. No—this was all real enough. I gazed around at the pale yellow-green vegetation, with its strange, unfamiliar forms. Low over the horizon hovered the sun, not half the size it should be to my earthly eyes.

Overhead the strange, tiny moons of Mars—moons only a few thousand miles distant and quite visible, though it was broad daylight, hurled themselves across a cloudless sky with a speed that was visibly tremendous. Scarcely a thing on which my eye rested had any aspect of familiarity to me. Yet everything was vividly real.

As to the girl—well, I didn't see what I could do about that. I sighed, and bent my steps slowly back toward the camp of the Ta n'Ur.

By the time I got there, the entire clan was drawn up in military array, Lilrin, pathetically courageous, stood with her father several paces in front of the line. When she saw me, she said something to Mornya and stepped forward to meet me.

"We have to go through with it, Danan-lih," she murmured. "Don't hate me too much."

"Don't worry, little one," I whispered. "They may make you my slave, or wife, whichever it is. But they can't make me treat you like a menial. You shall always be as free as you are now," and I gave her hand a little squeeze to reassure her.

"Your kindness makes me more your slave than ever," she whispered in reply. "Now come."

She led me before her father. He read some formula rapidly from an inscription on a metal plate—it looked like gold—which he took from a leather case slung over his shoulder. He spoke rapidly, in some other tongue than that used normally by the Ta n'Ur, so I could not follow him at all.

Then Lilrin bowed her head, and he placed my left

hand on her fair hair. Were there tears in her eyes? I wasn't sure. She kept her head averted from me.

The simple ceremony was over in a few moments. The clansmen took it all very solemnly. They gathered in little groups as they walked away, and there were many curious glances thrown over shoulders at us.

Mornya held out his hand to me, and I grasped it, Earth fashion. But I could sense that there was no excess of warmth in him at the idea of Lilrin's marriage to me, an unknown and mysterious Outlander—for Mornya, of course, did not know my full story. Lilrin had not dared tell him, nor in all probability would he have believed it.

He looked at me searchingly with troubled eyes. I stammered some promise to him that I would always consider Lilrin free, but I don't think his mind was on my words. He muttered a perfunctory benediction of some sort. Then he too turned and walked rapidly away, leaving us alone together in the center of the big square.

CHAPTER V

Honeymoon—And Disaster

THERE were no festivities. Nobody seemed to be happy. Certainly Lilrin and I were not. We had gone through a meaningless formula, one that was acceptable to none of us. Yet there seemed to be nothing that could be done about it.

Lilrin timidly interrupted my musing. "I shall get our supplies, Danan-lih—if it pleases you. And—"

"Supplies?" I interrupted. "What for?"

"We must leave the clan for three days," she explained. "Our—our wedding trip, you know."

"But look here, Lilrin," I objected. "That isn't going to mean a thing to us. I don't see why—We don't actually *have* to go, do we?"

She nodded her head. "It is the custom. We won't need so very much. I'll be back with our supplies presently."

I stood there frowning. The clansmen avoided me. I saw too that they avoided Lilrin. The newly wedded bride and groom were to be ignored, cast out, avoided for an arbitrary period of three days, it would appear.

Lilrin returned presently, laden with bags of food and weapons. Uncomfortably I remembered the birrok. Strapped to her back was one of those light metal tent-frames, and rolled and thrown across her shoulder was the tent itself. She staggered a-bit under the burden. I hastened to her side, but she motioned me away.

"No, no, Danan-lih!" she said. "It is I who am the slave-mate, not you. It is I who must carry the burden."

"Nonsense!" I began with some heat.

"It is the law," she said simply. "It is I who will suffer if you do not let me obey it."

I glanced quickly around. The clansmen were watching us intently. So I had to give it up. I shrugged my shoulders helplessly. Feeling meaner than I had ever felt in my life before, I followed Lilrin as she staggered through the triangular gate, away from the gleaming walls of the fortresslike edifice, off into the yellow-green forest.

But once beyond sight, a single bound carried me to her side. Heedless of her protests, I took all of the burdens from her. To my Earth muscles, the load was trifling.

"And now," I laughed, "where do we go from here? And why didn't you bring two tents?"

"Anywhere you say," she rejoined with the nearest thing to a smile since I killed the birrok. "And I shall sleep outside, if you want me to."

"You'll do nothing of the sort," I muttered. "I will."

There were low hills a few miles beyond the canal, and we turned our steps in that direction. Lilrin had regained a bit of her gayety, but was clearly ill at ease. We chatted in more or less desultory fashion as we went along.

At a point somewhat higher up than that at which I had concealed my little space ship, we prepared to cross the river. I thought with a little pang of my space-craft. Perhaps Lilrin would like a ride in it. Why—why, I might even take her back to Earth with me!

But, no. It wouldn't be as though we were really in love with each other—had really been married. So I left my thoughts to myself.

We paused presently at the bank of the stream. Of a sudden Lilrin gave a little shriek of alarm. I looked at her quickly. I had a fleeting impression of her startled glance at something behind me, of a twanging noise from that direction. Something hit me a tremendous blow on the back of the head, and I knew no more.

I DON'T know how long it was before I revived.

The pain in my head was terrific. Only by the most desperate effort of my will did I avoid slipping off into unconsciousness again. Little by little I struggled to my knees and looked around me, fighting the nausea in my stomach.

Lilrin was gone. So was all our baggage. There were marks in the soil as though of a struggle. I staggered to my feet. My gun was gone from my thigh holster. But I still had the little automatic inside my shirt.

It was not hard to tell what had taken place. An abduction! I had been shot down from behind, Lilrin had struggled, but had been overcome and carried away. So hasty had been her kidnapers that they had not searched me thoroughly, which was certainly a break from my viewpoint.

It stood to reason, of course, that Lilrin's abductors had not been members of her own clan. Who, then, were they? Members of a similar clan of nomads?

Or men of another race, from north of the barrier?

Well, what to do? After a little of my strength came back, I got into action. My space ship was under the water where I had left it. But the marauders apparently had found it, for one of the hatches—and not that of the airlock—had been opened. The sphere was filled with water. It would have to be dragged ashore and rolled over to be emptied.

For a moment I hesitated whether to return to the encampment and arouse the Ta n'Ur or not. But it would mean further loss of precious time.

So I didn't give that angle a second thought. And a moment later, my helplessness gave way to sudden excitement. For my desperately seeking eyes had caught marks on the bank of the stream—boat marks, as though a water craft of some sort had been run up there. It was easy to see that the stream did not flow much farther in that direction. The presence of those boat marks indicated flight in the opposite direction!

Away I went, upstream along the canal-valley in prodigious leaps of fifteen feet and more.* I was confident that my superiority over the Martians in speed, in strength and in the weapon I still cuddled beneath my arm would enable me to overcome great odds, and time was the important element right now.

At length I came to the Gap in the great quartz barrier, where at some far-distant age in the past the meteor which had plowed this canal-scar in the face of the planet had cut through. As yet I had caught no glimpse of a water craft.

A faint hail reached me from the glittering rocks above, and a figure stood forth, arm upraised.

I recognized him as one of the Ta n'Ur. I was up the face of the jagged cliff and at his side in a few moments. It was a young man named Uldor, on guard-duty at the Gap.

A "wheelboat," he told me, had gone downstream, had returned. But he had seen no one in it except four Northerners, with a crew of dulyals at the wheels.

"Still," he added, "the forward deck was covered. Many people might have lain bound and gagged beneath that cover."

"It's not part of the Ta n'Ur's duty," he went on, "to interfere with the Northerners themselves in their very rare passages back and forth through the Gap. Our obligation under our treaty with them is simply to prevent migrations of the wild dulyals."

As I dropped back to the canal Gap and leaped away toward the North, I saw Uldor racing madly back toward the encampment to pass on my alarm.

North of the barrier the character of the country changed somewhat. It was wild, but the vegetation was more prolific, and there were evidences here and there of ancient irrigation ditches laid out in regular rows. The canal itself was a shallow valley gouged across the face of a level plain. In its center the stream had cut a deeper and less regular course.

Several miles north of the barrier I came upon the

first evidence of habitation. It was a small structure, but built of that same iridescent material of which the fortress occupied by the Ta n'Ur had been constructed. And like that mysterious edifice, it was a monolith, very old and worn.

I redoubled my efforts and was passing the spot in mid-leap when a figure rose suddenly to contest my way.

It was my first glimpse of a Northerner. In the split second that elapsed before I hit him, my eye photographically registered a figure in flexible armor of yellow, overlapping metal plates. There was a conical helmet that guarded the nose, ears, and neck as well as the head. Curved plates fitted over the shoulders; armpieces cleverly overlapped at the elbows. Completing the outfit were a skirt or kilt on which more overlapping plates were fastened, and what might be described as metal boots, hinged at the ankles. The fellow, in a panic of frantic haste, was trying to bring one of those long bolt-throwing tubes up at me.

Evidently my great leaps and speed completely upset his judgment of distance. My heavily shod foot came down on the tube, and we went crashing to the ground with a great clangor of metal.

I was on my feet in an instant, but the Martian did not rise. There was a grotesque twist to his head. He had fallen clumsily and his neck was broken.

His armor, I thought, might be useful to me as a disguise, and for an instant I considered appropriating it. But on second thought I decided not to do so. It would be too awkward.

I turned away and was about to leap on up the canal-valley, which was becoming wider now, when I started back in surprise and alarm. Directly in my path was a mounted Martian. But it was the character of his steed that startled me.

It was not a horse at all, but—well, the only thing I could call it in any tongue of Earth would be a "dog." It was as large as a small horse and distinctly canine in appearance and in the intelligence of its eyes, as it stood there, softly poised, watching me as intently as was its rider.

The Martian was clad entirely in soft yellow leather, richly embroidered with sparkling beads. But his garb was not like that of the Ta n'Ur. Instead of a loose sleeveless shirt he wore a sort of collarless, fitted jacket with long sleeves and a sash of scarlet leather. In place of the kilts he wore tight-fitting leggings which covered his limbs entirely.

HE sat well forward on the back of his strange mount, with his toes hooked into peculiar stirrups just back of and under the animal's forelegs. The saddle was in reality a combination saddle and collar, with a metal handle on the top of the latter part. There was no bridle. The rider evidently guided his mount by voiced commands, or possibly by pressure on the collar handle. Though I judged the handle was more to aid him in keeping his seat.

* On Mars, Captain Hanley's weight would be one-third of normal. But the difference in gravity would not affect his muscular strength. Hence on Mars he would be three times as strong as on Earth.—Ed.

CHAPTER VI

Intrigues of Gakko

FOR a moment we confronted each other, and in that brief spell I was conscious of a liking for the handsome young face before me. In it was nothing of fear, though this Martian knight had no weapon that I could see. But he sat watching me with a shrewd and alert interest.

Then he raised his arms and held them wide, palms forward, in the Martian gesture of friendship. I glanced uneasily at the body of the dead guard. He noted it, too.

"It is nothing," he said. "An accident. I saw it all. The fellow exceeded his duty in trying to stop you without first challenging."

He paused a moment. "You are the 'mysterious guest' of the Ta n'Ur that Mornya was telling me about. I have never seen hair as dark as yours. What are you doing here?"

"Are you Mornya's friend?" I asked softly, my hand slipping inside my shirt until it closed over the butt of the little automatic. I thought his eyes narrowed a bit at that. But he showed no alarm.

"I am Mornya's friend," he declared flatly. "It was I who negotiated the treaty for the Ta n'Ur for the Council of Alarin, the Greater Lords of the Polar Cities."

I was quite sure then that this lad had had no part in the abduction of Lirlin, and determined to take a chance on him. After all, I would need help of some sort in rescuing the girl. So I told him how I had been struck down, and of the "wheelboat," as Uldor called it. His astonishment and indignation were obviously genuine.

"And just what were you about to do when we met?" he asked, giving me a curious look.

"Follow that wheelboat and rescue Lirlin."

He shook his head slowly in negative judgment. "You would not have had a chance," he said. "In the first place, you could not have overtaken it. I saw the speed at which you were leaping. I also saw the boat. In the second place, either Gakko, Alar of Gakalu, or one of his Epsin—Lesser Lords—was in charge of it. Then there were the dullyals at the wheels. They can fight, you know; and when handled by clever commanders, they are terrible adversaries.

"Oh I know of the bolt-thrower inside your garment, which your hand now rests on. I heard of that also from the Ta n'Ur. But there were fifty dullyals in that boat, and I don't think you have that many bolts in your weapon."

Discouragement must have shown in my face, for he laughed.

"But it's not so hopeless as all that. A plan is taking shape in my mind. Gakko is no friend of mine, nor of Layani, the Alar-Lur, Supreme Lord of the Cities. This abduction is surely Gakko's work. It is rumored that he has stolen girls from the Southern

clans before, that he has several of them among his wives."

He smiled reassuringly. "Come with me. We must talk this over. We have, I think, a great opportunity to outwit Gakko."

"But what of Lirlin in the meantime?" I objected.

"She will be all right. Gakko would not dare harm her until he had her safe within his power at home, in Gakalu. Besides, he must hasten to attend a council of the Alarin to be held on the Island in two days."

I consented. There didn't seem to be much else for me to do. The young Martian, who informed me his name was Banur, and that he was one of the Lesser Lords of Borlan, the land adjacent to Gakalu on the Polar Sea, made me mount his dog-steed behind him. At his command the animal set off, leaping and scurrying up one of the ancient irrigation ditches away from the canal-valley.

Across a cultivated plain we scurried, between fields of melonlike plants, toward a range of low, verdure-clad hills. It took some skill to cling to the great dog's back, but so fast did he run that it was a matter of minutes only before we had plunged into the vegetation on the slope of the hills. The animal was now scrambling upward to where, in a clearing, stood one of those great iridescent monolithic fortresses such as that occupied by the Ta n'Ur.

In through a triangular gate we flashed, and as the great dog came to a slithering stop, uttering a thunderous bark, a number of dullyals ran forward to take charge of him. It was the first chance I had had of seeing these near-human apes who served the North-erners as slaves.

Very manlike they were in build and carriage, and covered from head to foot with yellow fur. But their eyes, so it seemed to me, did not shine with even as great intelligence as those of the dog-steed.

I mentioned this to Banur.

"They are not as intelligent," he replied. "But they are more dependable, when through several generations of captivity they have been trained to their tasks. But they have their limitations. These fellows, for instance, are of use only in the steed kennels. Those over there have been trained to till the fields. They are good for nothing else."

"These"—and he pointed to several who were patrolling the walls, armed with spears—"are good soldiers, although quite incapable of acting on their own initiative. They can comprehend only a single military command at a time."

"I see very few humans," I remarked.

"No," he replied. "There are only a handful here, a few Ildin—that is to say, Freemen—and a dozen or so slaves. You see, this is merely an agricultural outpost. But its supervision comprises part of my duties, and I have to make periodic visits here."

Banur insisted that I change from my Earth clothes and put on a Martian suit, which he found for me among his stores. After that we tarried at the post only long enough for refreshments. While we drank

"lilquok," that invigorating beverage the Martians make from one of their varieties of giant melons, Banur explained to me something of the law which held together the Northern Cities.

SEVEN lands bordered on the Polar Sea, ruled by seven Alarin. One of these, Layani, Alar of Hoklan, was by election Alar-Lur, or Supreme Lord of the Council of Alarin.

Theoretically the Alarin were as subject to the law as the Epsin, or Lesser Lords, and the Ildin, or Freemen. But as a matter of fact, they enjoyed absolute power; for accusations could be brought against a Martian of the Polar Cities only by one of equal or superior rank.

There were few of the Alarin who would not welcome the retirement of Gakko from among them, but none who would risk the precipitation of a general war. Gakalu, the land ruled over by Gakko, was one of the richest and most powerful of the confederation, with strong natural barriers, a larger population of Ildin and slaves than any other land, and by far the greatest force of fighting-trained dulyals.

Likewise, no other Alar was anxious to give Gakko any cause for offense that could be avoided.

"But," Banur suggested thoughtfully, "I think that the man with a just complaint against this tyrant, and the courage to slay or strip him of his power, would not be regarded as an enemy. Not, at least, by the Alar-Lur, the Supreme Lord, who fears Gakko's growing influence. Nor the rulers of Borlan, Tuskidon and Ilmo.

"The Alarin of Trilu and Yonodlu, the lands beyond Gakko's on the other side of the Sea, are definitely his supporters. But I do not know that even they would necessarily feel injured by his elimination.

"Certainly it would be their best policy to cultivate the favor of the other Alarin, in the event that Gakko were deposed or slain."*

Banur paused uncomfortably. "Now—er—I don't know whether you would resent being made use of in this way. You see, I am being perfectly frank with you. But you appear to be determined to fight Gakko single-handed anyhow, and—

"Well, I thought it might not be displeasing to you to know that you can count on a certain amount of secret help—since your decision has already been made. Of course, if you fall into Gakko's hands you must realize that no Alar could go very far in giving you protection. The whole situation—er—is rather delicate. I'm sure you can understand our position," he added hastily.

I grew thoughtful at this. I did not like the idea of plunging into the midst of the political turmoil in a world with which I was virtually unfamiliar, of being made a catspaw by certain of its rulers. I had not leaped all the distance from the encampment of the

Ta n'Ur to become an assassin of Martian kings. I merely wanted to rescue Lilrin and punish the villains who had abducted her.

"Of course, you are under no obligation to accept any aid at all," Banur put in shrewdly. "My only thought was that you want to rescue the girl and—"

"I'll do it!" I said, jumping to my feet.

"Good!" echoed Banur exuberantly. "Come."

CHAPTER VII

I Trail Gakko's Villains

A FEW moments later found me galloping with Banur at the head of a band of mounted dulyals. Banur had supplied me with a great, powerful brute of a dog to ride. The beast looked understandingly at both of us when Banur turned him over to me. Wagging his immense tail, he accepted me from that moment as his master.

Both the dulyals and the dogs on which they were mounted accorded me the same understanding, at a word from Banur. The young Martian then drilled me in the words and methods of command necessary for their control.

The most remarkable affection existed between the dulyals and their mounts. There seemed to be a perfect understanding of commands and coördination of action. The dogs were more intelligent than the great dulyal apes, but of course lacked much of their physical prowess. Both, Banur explained, were terrible in battle, although quite docile to the commands of their master, whomever was the leader selected by the Northerners for a particular task.

To me, it was also comforting to learn that the dulyals were trained to the use of the spear and a short, broad-bladed sword almost like a cleaver, and that they carried these weapons with them.

"We're taking an overland short-cut toward a little seaport at the boundary of Borlan and Gakalu," Banur said. "It is there, undoubtedly, that Gakko has taken Lilrin. For once out on the Sea, she will be in Gakalu waters, and he will have a run down the coast of only some seven hundred miles to Gakko's own city."

"Will we catch them there, do you think?"

"Not we," he said frankly. "Possibly you. But if you can't overtake them before they reach their own territory, I should advise you not to try it, but to journey on leisurely along the coast of the Polar Sea until you arrive at the city of Gakalu.

"Establish yourself there as—let me see, now—say, as the son of a rich merchant of Ilmo, for that is the land farthest away from Gakalu across the Pole, and you would be less likely to meet Ilmonions in Gakalu."

For the rest of our journey, as our great dogs tore along with us at amazing speed and the cavalcade of dulyals raced after us, Banur supplied me with much information as to the customs of the Martians.

At length he motioned me to give the order to halt,

* Politics, it would seem, is the same on any planet with an intelligent population. It is not beyond the bounds of reason to suppose that the present crisis now facing Earth may not at some time have been duplicated in a remote planet.—Ed.

for the dullyals and dogs now looked to me only as their master, as Banur himself had previously commanded them. He pointed toward a silvery sheen on the horizon beyond a growth of short ferns.

"It is the Sea," he said. "Your way lies straight ahead. You will see the village after a little bit. Luck be with you, and may you return safe from this daring adventure, for there are many things I would like to discuss with you. Things which I feel I cannot talk over with you at this time. Besides, there has been so much information to give you."

"On what points are you curious?" I asked, having a pretty good idea of what was on his mind from the surreptitious glances he had been casting my way.

"Well, for one thing, your coloring is like that of no man I have ever seen," he stammered, and his face grew red. "Indeed, throughout all history, even back through the legendary period of the great Rain of Fire, there is no mention of men with brown hair and deep blue eyes. You appeared suddenly—from nowhere it seemed—among the Ta n'Ur. At least, so Mornya told me.

"Among the Southern Clans, it is considered bad manners to pry into the affairs of strangers and guests." He smiled deprecatingly. "You see, our own customs are somewhat different."

"Does history or legend shed any light on the lands below the equatorial desert?" I asked him.

"None," he admitted. "It is a great subject for speculation among the wise men as to what may be on the Southern half of the globe. We know, of course, that we do live on a globe and not, as it might seem, on a great, flat circular world. But somehow I do not believe you crossed that desert. Neither do the Ta n'Ur."

I laughed. "What do you think, then?" I asked.

"My thought is so wild that I hesitate to take it seriously." He was looking at me keenly. "Have you ever watched the skies at night, and gazed on the Green Planet?"*

"Often," I had to admit. "I've often seen it from a distance." Well, considering the many space voyages I'd made, that was true enough!

"Have you ever wondered whether it was a habitable world?"

"No, I never had to wonder about it."

*By Green Planet, Banur meant of course Earth, for that is how Earth would look to the Martians.—Ed.

The look of disappointment on his face was eloquent. He had been shrewd, but he had been frank, too. I could but reply in kind.

After a pause I added: "I know that it is."

"What!" Banur shouted. "Then you really—"

"Yes. That is where I came from. 'Earth,' we call it."

Banur acted like one suddenly bereft of his senses. He shouted and laughed, waving his arms madly. Then as quickly he turned and was gone, his great dog racing and bounding across the plain away from me, back in the direction from which we had come.

Amazed and puzzled, I could only gaze helplessly after him. And by the time I thought of calling out to him, he was beyond hearing.

Then came the thought of little Lirlin. Well, that was my job, wasn't it? So, with considerable misgivings, I turned toward the distant Polar Sea. I shouted "Hep!" and pointed forward. In an instant, followed by the dullyals and the dogs, I was bounding along, frequently grabbing at the saddle-handle to steady myself, and muttering the while a silent prayer that at least I had had experience riding horses.

To my earthly eyes, the village was indeed strange. I was astonished to find that most of the "buildings" were underground. In this they were quite unlike the only other Martian structures I had seen; the ancient, iridescent monoliths.

The modern Martians, as I was to learn, dug their cities and villages deep underground, with thick-walled superstructures. Soil and rock were mixed with a red cement, made into large slabs or bricks. The superstructures were little more than entrances and anterooms to the quarters beneath.

Remembering what Banur had told me—that the "gasto," or inn, would be located on the outskirts of the village—I held up my hand. The great dogs behind me slithered to a sudden stop, as did my mount.

I looked around for a shaft of stone or cement bearing a picture or a carving of a dog's head. A metal rod projected from a hole in the ground beside it. This I lifted and let drop again. Somewhere down in the ground there was the sound of a gong, and the metal door in the wall before me was opened.

(TO BE CONCLUDED NEXT MONTH)

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Lancelot Biggs

COOKS A PIRATE

By
NELSON S. BOND

"Cooking," explained Biggs, "is simply a matter of chemistry." But he didn't expect that he'd have to prove that statement!



THE whole trouble started with Slops. Slops wasn't a *bad* cook, you understand. He just wasn't a cook at all, rightly speaking. He had what you might call a "tapioca complex." It was tapioca for breakfast, tapioca for lunch, tapioca for dinner. Every day. Boiled tapioca, stewed tapioca, even fricasseed tapioca—

Ugh! When you hop gravs twice a month on a lugger shuttling between Earth and Venus, you can't get by forever on a diet of ta—that stuff!

Anyhow, it finally got to be too much for even an iron-bellied old spacedog like Cap Hanson. So when we pulled into the Sun City airport, Cap said firmly, "You're through, Slops. And I do mean through!" And he kicked our (alleged) chef off the *Saturn*, along with his clothing, his back pay, his harmonica and his ta—you know what.

Which left us way out on the end of a limb, for it turned out that there wasn't a single spaceriding cook dry-docked in Sun City. While the *Saturn* was taking on its cargo for Earth, pepsin and medical supplies, mostly, with one or two holds full of *mekel* and *clab*,

the Skipper did his doggonedest to scare up a grub-wrangler. But no soap.

An hour before we were scheduled to blast off, he ambled up to my control turret. He plumped himself into my easy chair and scratched his gray pate nervously.

"Damn it, Sparks," he complained, "I thought I was doin' the right thing when I fired Slops, but—"

"You were," I told him. "By chucking that grease-ball off the ship you saved fourteen lives. The crew. They were planning on either mutiny or murder, they didn't care which, if they had to eat one more dish of that goo."

"But," he continued worriedly, "in another hour we throw lugs for Earth. And we don't have no cook. What the blue space are we goin' to do?"

Our First Mate, Lancelot Biggs, had entered as the skipper was talking. Now he offered, helpfully, "I'll ask Slops to come back if you want me to, Captain. I saw him at the Palace Bar—"

"No!" said the Cap and I in the same breath.

Biggs looked hurt. His wobbly Adam's-apple bobbed in his throat like an unswallowed orange. And he defended, "Well, after all, tapioca's good for you! It contains valuable food elements that—"

"Shut up!" howled Cap Hanson. He wasn't in a mood to take advice from anybody, and especially Lancelot Biggs. Perhaps that was because our recent "transmuting trip," in the course of which we had attempted to turn lead jars to platinum by exposure to cosmic radiation, had failed. The Corporation had carpeted Cap for that, and Cap was sore at Biggs because the whole thing had been Biggs' idea in the beginning. "I'll murder the guy who even mentions that—that stuff!"

Mr. Biggs said aggrievedly, "I was only trying to be helpful."

"You're as much help," the skipper told him caustically, "as fins on a dicky-bird's chest. Now, git out of here! G'wan! Git!"

Our lanky first mate turned and started to leave the turret. And then, suddenly—

"Wait a minute!" yelled Cap Hanson. "Where do you think you're goin', Mr. Biggs?"

Biggs gulped, "Why—why you told me to—"

"Never mind what I said! Do what I say! I think I've got the solution. Mr. Biggs, that cranium of yours appears to be stuffed with miscellaneous lore. Do you by any chance happen to know anything about the art of cooking?"

"Who?" said Biggs. "Me? Why, no, Captain. But I don't imagine it would be very difficult. After all, it is based on elementary chemical processes. By exposing certain organic substances to the action of hydrogen dioxide, under suitable thermostatic conditions—"

Cap Hanson's jaw dropped open. He goggled at me. "Wh-what's he sayin', Sparks?"

"He means," I translated, "that cooking is easy. All you need is water, heat and victuals."



"MIND YOU," SAID THE PIRATE ICILY, "NO FANCY MEDICI FLAVORING TO THIS MEAL"

"Oh!" The skipper grinned ghoulishly. "In that case, our problem's solved. Mr. Biggs, you've just earned a new private office an' a new uniform. You'll find both of 'em below decks, third door on your right."

It was Biggs' turn to look shocked. His protuberant larynx performed a reverse Immelmann. "H-huh? But I'm not a cook, Captain. I'm your First Mate!"

"You *was* my First Mate," corrected the Old Man coolly, "until just now. The IPS codebook says, 'It is the Captain's privilege to draft any member of crew or command for any duty in times of emergency.' This is an emergency. An' besides, you just got done sayin' that cookin' is simply a matter of exposin' certain hoochamacallits to the action of thingamajigs. So—" He brushed his hairy paws with a gesture of finality, "That's that! To the galley, Mr. Slops!"

AND he was right. That was that. But the funny part of it was that, forced to a showdown, Lancelot Biggs came through!

The first meal out, which was lunch served at noon Earthtime, I went down to the dining hall thinking anything might happen and expecting the worst. I got the shock of my life, and shocks are a not inconsiderable part of the life of a spacelugger radioman.

Mr. Lancelot Slops had pulled a banquet out of the hat! We had fried chicken with cream gravy, hot biscuits, candied yams, a side dish of stewed *clab*, Creole style, raisin pie, and the best damn coffee ever served on the wallowing old *Saturn*.

What the other men of the crew thought, I have no idea. They didn't say. Every man-jack of 'em was so busy shoveling grub into his puss that the conversation was dead as a Martian herring. But after I'd bulged my belt to the last notch with fried pullet, I waddled into the galley and confronted Mr. Biggs.

"Biggs," I said accusingly, "you've been holding out on us! Why didn't you tell us before you could cook a meal like that?"

He shuffled his feet sheepishly. He said, "Was it all right, Sparks?"

"All right? It was terrific! I haven't had such a feed since I was a kid."

He looked relieved. "I'm glad. Because, you see, that was the first meal I ever cooked."

"It was the first—*what*!"

"Mmm-hmm! But there were lots of cook books here in the galley. And I figured so long as I had to do it, I might as well do it right—" He grinned at me shyly. Once in a while I wondered, briefly, whether any of us understood this strange, lanky genius, Lancelot Biggs. This was one of the times. "I—I found it rather interesting, Sparks, to tell you the truth. It is, just as I told Cap Hanson, just a matter of elementary chemistry. The pots and pans are the test-tubes; the stove is a huge Bunsen burner."

I said admiringly, "I'll hand you one thing, Mr. Biggs. You believe in sticking to theories, don't you?"

"But of course. 'Get the theory first'; that's the

big secret of success in any undertaking." He looked pleased and a little excited, too. "We're going to have a good trip home, Sparks. There's plenty of food here to experiment with. And in the holds—"

It was just then that I caught my number being buzzed on the intercommunicating audio. I cut through and yelled, "Sparks speaking. What's up?"

"Sparks?" It was my relief man calling from the radio room. "You'd better come up here on the double. A message from Sun City, and I think it's bad news."

"Right with you," I hollered. I snapped a brief "See you later!" to Biggs and raced up the Jacob's ladder to the turret. My relief man was there, also Cap Hanson and the second-in-command, Lt. Todd. All three of them looked a bit grim and a bit glum and quite a bit apprehensive. My relief shoved a wire flimsy into my hand. It was a cipher message from Sun City spaceport. I knew the code as well as I know English and Universal, so I read it aloud.

"HANSON COMMANDER IPS SATURN EN ROUTE VENUS-EARTH. TURN BACK IMMEDIATELY FOR CONVOY. PIRATE HAKE REPORTED ON COORDINATES THREE FIFTEEN PLUS NINE OH NINE YOUR TRAJECTORY." It was signed, "Allonby, Comm. S.S.C.B."

I stared at Cap Hanson, wondering if my face were as queasy as my tummy felt. I said, "Hake! Runt Hake!"

Hanson said, "Yes, but that's not the worst of it, Sparks. Tell him, Mr. Todd."

Todd wet his lips and faltered, "We—we're in a serious spot, Sparks. We accelerated to max twenty minutes ago and cut motors for the free run. And since we had—or thought we had—almost nine days of idleness, I told Chief Engineer Garrity he could take down that number. Three hypatomic that's been missing."

That still didn't make sense. I said, "So he took it down? So what? He can put it together again, can't he?"

"No. He found the casing worn, melted it down for a recast. We—we can't recase it for at least two days!"

FOR the sake of you Earthlubbers who don't get the lingo, let me say it in words of one syllable. We were in a hell of a jam! The hypatomics are the motors that operate spacecraft. In this case, one of them had shown signs of weakness. With the ship "free wheeling," so to speak, in space, the engineers had taken down the faulty motor, discovered it needed remoulding, and had melted down the casing. As Todd had said, it would take at least two days—probably more—to recast the moulding, put the hyp together again, so we could blast.

But the worst of it was — Hake! Runt Hake. There are pirates and pirates in the wide transverse between the planets. Some of them are good guys, that is, if an outlaw can ever be considered a "good

guy." Like Lark O'Day, for instance, that gay, smiling bandit who always gave lugger captains a signed receipt for the cargoes he stole, and who had once let a tramp freighter go through untouched because the Captain acknowledged his life savings were wrapped up in the cargo. Who had once stopped a passenger superliner for the express purpose of stealing a single kiss from its charming passenger, the newly crowned "Miss Universe."

But others were skunks and dogs and—well, think of the nastiest things you can think of. Then multiply by ten, add infinity, and you have Runt Hake.

Runt Hake was a killer. A throwback to the rotten old days when men's first thoughts were of death and war and violence. He was a pirate not so much because of the value of the cargoes he lifted as because he liked to do battle. And he had a sadistic strain in him somewhere. His idea of good clean fun was to board a freighter—like the *Saturn*—unload the cargo at his convenience, then blast a slow leak through the outer hull.

After—I might mention—having first removed all lifeskills and bulgers from the ill-fated victim. Once, in the asteroid Sargossa, I saw a ship that had been scuttled by Runt Hake's cutthroat crew. Its crew still remained with the ship. But not as recognizable human beings. As raw and frozen clots of pressured flesh.

Oh, a swell guy, this Runt Hake. And now we, disabled and helpless, were drifting right into the trajectory where he awaited us.

Cap Hanson said grimly, "There's nothin' much that we can do about it, of course. We've got one six millimeter rotor-gun for'd. We'll give him that."

"And get ourselves blown to atoms," interjected Todd, "with his pierce-guns. No, Skipper, that's no good. But how about the Ampie? If we set out our Ampie, maybe—"

An "Ampie" is that strange, energy-devouring beast from Venus whose inordinate appetite for electrical power forms a shield for spaceships penetrating the Heavyside layers of the various planets. It wasn't altogether a bad idea. But Hanson shook his head.

"No. It wouldn't work. An Ampie couldn't take a heat ray. There's only one thing to do. Send word for the convoy to come on the double-quick—and hope it reaches us before we run into Hake."

That was my cue. I shoved the relief man to hell off the bench and got the wobble-bug going. And, mister, I filled the ether with SOS's—and added a couple of PDQ's for good measure. I picked up an acknowledgment from Sun City, and threw them a hasty explanation. They wired back that the convoy cruiser would make all haste, and to not be frightened. . . .

Ha! Can I help it if my knees chatter?

THERE was one thing you could absolutely depend on Lancelot Biggs to do. And that was—stick his nose in at the wrong minute. For as we three were giving the sob-towel the good old go-over, the door

popped open and who gangled in but Mr. Slops, First-Mate-and-Bottle-Washer! His face, in contrast to ours, was radiant with joy and delight. He had a grin on his phizz that stretched from here to there and back again. He chortled, "Hey, Cap—"

"Go 'way!" mourned Cap Hanson. "I'm thinking."

"But, look!" Biggs opened one hamlike paw. And there was a wee, gray ship-mouse. He placed it on the floor before him. "Look what I found in the No. 4 Bin. It acts so darned funny—"

"Go 'way!" repeated the skipper, still gloomily. "If you make me lose my temper—"

Biggs said, "But he *does* act funny—" And to tell you the truth, the little mouse did. Usually, you know, a mouse is the scarediest thing alive. Put him down in a place like this, surrounded by giant humans, and he'll run like mad to the darkest corner.

But this little twerp didn't run. Matter of fact, he deliberately moved to the man nearest him, Todd, that was, and began to nuzzle himself against Todd's shoe! Just as if the Lieutenant were an old and loved acquaintance! Mr. Biggs chuckled again.

"See that? Do you know what makes him act that way, Skipper? I'll tell you. It's the pro!"

"*Mister Biggs!*" The Old Man's face was fiery red with rage. "This is no time for nonsense. Within hours, or perhaps minutes, we may all be dead! Now, for the last time, get out of here!"

Biggs, sort of stunned, said, "Y-yes, sir!" He retrieved his curiously-acting little pet from where it rubbed its soft muzzle against Todd's shoelaces, put it in his pocket, and backed out the doorway. As he went he tossed me a beseeching wigwag. I nodded; then when no one was paying me any neverminds, joined him in the runaway outside.

"What's the matter, Sparks?" he demanded.

I gave it to him, both barrels. He had a right to know. Every man has a right to know when it's bye-bye time. "But don't tell the crew," I warned. "The Old Man'll do that if he thinks best."

Biggs' eyes were huge and round. "Runt Hake! Gee, no wonder the Skipper was cross." He plunged into one of his characteristic silences. Then, suddenly, "Hey!"

"Hey, what?"

"They say Hake is a show-off. Likes to crack the whip on captured ships, ordering up big meals and so on before he scuttles it—"

"Well?" I said. "You think you're going to poison him, maybe? Don't be a dope. He'll make you swallow a pussfull of everything you serve him."

"Never mind. I'm not sure my idea is any good—yet! But have you got a book on physiochemistry?"

"In my office."

"Swell. Get it for me, will you? I'll explain later."

Well, I got him the book and he jammed it into his pocket and disappeared toward the galley, jogging along like a stork on stilts. But I had no time, now, to laugh at Biggs' physical or mental peculiarities.

Because my ears had just caught a sound they did

not want to catch. The sound of metal grating on metal near the off-port. The banging of a mailed fist on *permalloy*, the asthmatic wheeze of the airlock, a sailor's shout ending in a choked gurgle—

I charged back into the radiorum. "Cap," I yelled, "at the airlock! Somebody. It must be—"

It was. Runt Hake and his pirates.

YOU wouldn't think, to look at Runt Hake, that he was a killer. True, he held a hand piece gun on us as he approached, moving smoothly, lightly, up the runway. A half dozen men behind him also held their side arms poised, ready for action, while another half dozen deployed down the side corridors toward the engine rooms and control turrets. But as Hake came nearer he tossed back the quartzite headpiece of his bulger, and I saw that his hair was wheat-gold, his lips curved into something like a tender smile, his cheeks smooth, soft, boyish.

His voice was gentle, too. He said, "You offer no resistance, Captain? That is wise."

Cap Hanson said, "Hake, I surrender my ship to you freely. But do not harm my men. That is all I ask. My men do not deserve—"

"But, Captain!" The slender little pirate's eyebrows lifted archly. "Surely you are a little premature in your pleas? We have just arrived. There are so many, many things to be done before we—ah—enjoy our little pleasures."

And then, as he said that, I saw why men cursed the name of Runt Hake. It was not in his face. His golden hair, his pink cheeks, his soft mouth—all these were but gilding for the rottenness within him. The real Hake was in his eyes. Those dancing, glinting, gloating eyes that leaped into swift, flashing delight as he hinted at that which was to come.

He was a devil. A pint-sized devil, perhaps, but a devil nonetheless. I knew, now, that the stories were all true; that we could expect no mercy of this man. He would amuse himself with us for a while, toying with us in feline fashion. Then he would leave. And we would stay. Like the broken things I had seen in the Sargossa.

He was speaking again. Softly, melodiously, as if he were a warrant officer at some cargo port on Earth rather than a midspace pirate appraising his "take".

"The cargo, of course, Captain, is mine. Even now my men will be transferring it to my ship beside yours. But there are a few other things we will do while aboard. It is lonely, being in space for months on end. And we do not dine luxuriously. You have, I suppose, a well-stocked larder? With fine foods; wines, perhaps, to tempt the palate?"

Hanson tried again.

"We have, Hake. And they are all yours if you'll promise me the men will be unharmed." He hesitated. "Take me along as hostage, if you want to. That'll be all right. But—"

"But, no, Captain! That would never do. I think you had best remain—with your men." Again there

was that tiny, dancing light in Hake's eyes. "You see, many know my name, Captain, and I understand I have a small reputation. But none have ever seen my face—and lived. It would be unfortunate if I were to be identified, would it not?"

He turned to his followers.

"Disarm them," he designated us negligently. "And when the cargo has been transferred, have our men come in to dine. We will dine aboard the *Saturn*."

YOU Earthbubbers will think this part strange, maybe? That we showed no more resistance than this to Hake's invasion? Well, I don't blame you. I've read *Martian Tales* and *Spaceways Weekly*, too. The writers for those mags would like you to believe that every freighter-captain is a horny-fisted John Paul Jones. But think it over! The *Saturn* was a lumbering old cow compared to Hake's streamliner. Hanson had adopted the only sane policy. To placate the pirate, be nice to him, hope we could stall off his scuttling plans until the S.S.C.B. cruiser reached us.

So for more than two hours, unarmed and disconsolate, we of the *Saturn* sat around and diddled our fingers while Hake's men, using our engine crew, the wipers and blasters, for porters, transferred the more valuable parts of our cargo to their ship. They didn't take the bulk stuff. Just small necessities that could be fenced from a hideout on one of the rogue asteroids.

Meanwhile, Runt Hake had made at least one special trip. Down to the galley. He took Todd and Cap and me along so he could keep an eye on us. Down there we found Lancelot Biggs, quietly reading.

Hake said in that soft purr of his, "You—you're the cook on this ship?"

Biggs answered, "Mmm-hmm."

"You will address me," suggested the little outlaw, "as 'Sir.' Very well, Slops. I want you to prepare a meal for us. A good meal. Fresh meats and vegetables. You have no idea—" He drawled this last to Hanson. "How one wearies of canned concentrates."

Hanson just glowered. But Biggs looked confused. He said, "I—I'll have to get produce from the storage bins if you want a big meal. This galley's small—" He looked about him helplessly.

Hake nodded. "That is granted. But, mind you, attempt no medieval—ah—toxicological exploits. I remember the chef of the *Spica* tried something of the sort. Poor lad! He screamed horribly . . . I shall never forget it."

I bet he wouldn't! The louse. But I hoped, now, that Biggs would understand I had been right. He couldn't pull any funny business on Runt and get away with it.

He seemed to understand, all right. He said, goggling, "I'll do the best I can—sir. It will take a little time, of course."

"We have time and to spare," agreed Hake. "A good meal, that is what we want. And now, gentlemen—?"

He motioned us toward the turret room. We started to leave the galley. I was the last to pass through the door. As I did so, I felt a fumbling at my side. Mr. Biggs was shoving something into my pocket. He whispered in my ear, "Sparks—give each of our men a piece. Tell them to chew it!"

FOR a moment my hopes flamed high. I didn't know what Biggs had up his sleeve, but I dared dream that he had devised some way of overcoming the pirate menace. But when I managed to get away, unobserved, a few minutes later to see what he had thrust in my jacket, my hopes died as suddenly as they had been born.

The stuff was nothing but pepsin. Plain, ordinary pepsin; a by-product from the outspread Venusian ranches.

I was half minded to chuck the damn stuff away. I thought maybe worry, desperation, had made Biggs slip his grays. Then I thought better of it. After all, he may have had some reason. And in a spot like this, any gamble was worth taking . . .

So, slowly, I started getting the stuff distributed around. I managed to slip half the package to Doug Enderby, the steward, with instructions to get it to the black gang. I met Chief Garrity 'tween decks, and gave him some for his engine room crew. Todd took a piece, wondering, reluctant, but put it in his mouth when I signalled him to do so. Me? Sure, I had some, too. After all, it tasted good. And a man might as well check out with a clean taste in his mouth.

The only man I couldn't slip a piece to at any time was Cap Hanson. Runt Hake had the old eagle eye on the Skipper. Matter of fact, Hake had the eagle eye on all of us. He didn't miss a trick, that murderous little squirt. Just before dinner was served he made my heart miss a beat when he asked, "What are you chewing on, Sparks? Gum?"

He gave me the fright and the out at the same time. I nodded. "Yeah," I said. Then, fearful not to ask, "You want a piece?"

He shuddered delicately. "Barbarian custom. I do not want a piece."

Boy, was that a break for our side!

SO, like I said, Biggs donged out the dinner call, and we all went into the mess hall. Talk about irony! Here we were, a score of honest, hard-working spacemen and an equal number of pirates, sitting down to the same table, eating the same meal.

Screwy? Sure—but that was Hake for you. As Mr. Biggs had said, he was a showoff. But don't think he took any chances. We were unarmed, his men were walking hardware stores. As for the conviviality of that banquet, that was strictly on the stinko! To outward appearances, we were all palsy-walsy at the banquet table; actually we of the *Saturn* were being fattened for the slaughter to follow.

Still—well, you know the old gag. "The condemned man ate a hearty meal." That's what I did, and that's

what most of the other fellows did, too. Because Mr. Lancelot Slops had come up with another Q.E.D. that cooking is, after all, nothing but applied chemistry.

We had, just to make you drool a little, chilled consommé with a light sherry. Then a tempting wisp of baked whiting, served with Moselle Erdener Treppchen, and was the Old Man fuming! (He'd been saving that for his golden anniversary). Then a chicken sauté Florentine . . .

They were the preludes. The main drag-'em-out was a saddle of lamb accompanied by peas in mint, potatoes Parisienne, and served along with Pommard, 1974. The salad was a Salad Alma; the dessert was something which Biggs told me later was Plombière a l'Havane Friandises (pineapples, bananas, frozen custard, and not a damn bit of tapioca in it!)

This came along with the Piper Heidsieck, '65. A demi-tasse was next, then liqueurs—

It was here that Runt Hake called a halt. "We'll transfer the beverages," he said, "to our own ship. We want no drunkenness aboard while we—ah—do that which is now necessary. Captain Hanson?"

He nodded significantly toward the turret room. I rose, so did Todd. Surprisingly, Biggs joined our group as we moved up deck. Hake said, with a malevolent regretfulness I shall never forget, "We have enjoyed our banquet exceedingly, Captain. But you understand I can allow nothing to stand in the way of my next—ah—duty. So—"

Hanson said stonily, "You will give us a lifeskiiff before scuttling the *Saturn*, Hake?"

Hake lied, "Captain, I had planned to do that very thing. But a most unfortunate accident . . . it seems that some of my men were so careless as to blast holes in each of the skiffs. Of course if you'd still like to take your chances in the damaged craft—?"

Oh, he was a whipper, that Hake! I looked at Todd and saw the same thought mirrored in his eyes that I was thinking. This was our last chance. If we didn't get Hake now, it would be too late. I tensed myself. If we could grab the pirate chieftain, maybe his men would not dare do anything for fear of hurting him. And Hake, quick as he was on the trigger, might not get us both before—

Then once again Lancelot Biggs intervened. To me he barked, "No! No, Sparks!" And to Hake, quietly, almost tenderly, "Why, Mr. Hake—it's all a big mistake, isn't it? These rough, nasty old men think you want to hurt them! And you don't at all. Aren't they the old meanies?"

AND then—hold your hats, folks!—and then Runt Hake's soft mouth began to twitch! Yes, twitch! It pursed up like the mouth of a kid, his eyes wrinkled, and he began to blubber!

"Hurt them?" he complained. "Me hurt them? Why, I wouldn't do a thing like that! I love them! They're my pals." And he tossed his fierce gun away, reached out and patted Biggs' cheek!

Beside me I heard Lt. Todd whisper hoarsely,

"Good gods of Greece, what is this!" I myself was stunned for a moment. But I had sense enough to stoop down and get Runt Hake's gun before this crazy interlude had passed. "He's blown his fuses!" I squalled. "Grab him, Todd! Mr. Biggs, come with me! You and I will round up his crew—"

But Biggs said quietly, "Take your time, Sparks. There's no hurry. See?"

He stepped to the wall; flicked on the visiplat that showed the interior of the mess hall. And there, where a moment before, a grim-faced score of space pirates had maintained watch over our crew, now our crew were standing staring with blank, uncomprehending faces at twenty men who looked and acted for all the world like affectionate puppies!

They were hugging each other, patting each other's arms and faces, murmuring soft words of endearment. It was stupefying. More than that—it was embarrassing! Off in one corner a bearded, one-eyed outlaw dandled a companion on his knee. Another burly bruiser, big enough to tear a man in half with his bare hands, was playing piggy-back with a buddy!

I gulped and stared and gulped again. I choked, "But, what—what—"

Biggs said suddenly, "Sparks! You didn't give the Skipper a piece of that pepsin!"

"I didn't get a chance. But how—"

Then I saw. The Skipper and Runt Hake were sitting in the same chair, murmuring soft words of tenderness at each other, stroking each other's hair fondly. Just as I looked, the Old Man leaned forward and gave the pirate a big, juicy kiss on the forehead!

And just then there came a welcome interruption. The audio throbbed to electric life; a brusque voice rasped, "Calling the *Saturn*! *Saturn*, ahoy! S.S.C.B. Cruiser *Iris* calling. Stand by! We'll come alongside you in twenty minutes. . . ."

AFTERWARD, when Runt Hake and his pirates, still babbling incoherent protestations of endearment, had been removed to the patrol ship and taken back toward the Venusian prison that had long awaited them, we held a confab in my radio room. Todd was there, and Chief Garrity, and Lancelot Biggs and myself. Also a very foggy-eyed, befuddled Captain Hanson who seemed to be having a hard time keeping from saying we were all "dear, sweet boys"—as he had told us quite a few times in the past hour or so.

I couldn't make head or tail of it. So I asked Biggs

bluntly, "But what was it, Mr. Biggs? We all know it was something you put in the food. Something from which the pepsin saved us. But what? Surely no drug would make a man act like that."

Biggs grinned, his Adam's-apple jerking amiably.

"No, not a drug. But a chemical. Prolactin, to be exact: If you'll remember, I started to tell you we were carrying a load of it to earth."

"Prolactin?" said Todd. "What's that?"

"An extract of the pituitary gland; the hormone that governs human affections. Prolactin is the hormone that is responsible for all acts of parental love. It causes roosters to brood and set on eggs, tomscats to give milk and milk-deficient females to become normal. It is commonly known as the 'mother-love' crystal."

"And we," I said, "were carrying a load of it. I still don't understand, though, why we had to chew the pepsin. And why it failed to turn all of us into bunny-buggers like—"

I glanced at the Old Man, then glanced away again. He looked at me fondly.

"Well, you see," explained Biggs, "prolactin happens to be a pure protein. And pure proteins are insoluble in most things, alcohol, water, anything you might normally take in your diet.

"I cooked Hake's banquet, and his goose, with liberal sprinklings of prolactin. But, as you had previously pointed out, I had to find some way of keeping our men from being affected by the hormone that disrupted their morale. Pepsin was the answer. Pepsin breaks down pure proteids into soluble peptones. That is why it is commonly used as a digestive agent."

"Drwstbynlyv—" mumbled the Skipper soothingly.

"Eh?" I demanded, "What's that?"

Biggs looked embarrassed. "I'm not sure," he said, "but I think he's saying, 'You're a dear sweet baby and I love you very much!' Er—Sparks—I think maybe we'd better put him to bed until it wears off . . ."

So that was that. And maybe I shouldn't have told you all this; I don't know. Because the Skipper, recovered now from his spell of "maternal affection" is rather sensitive on the subject. And I'm still clicking the bug on the *Saturn*.

Anyhow, now you know. But if you ever tell Cap Hanson I told you, it's going to be just too bad for me. I may have to catch the next express for Pluto and points west. Me and Biggs both. There's not much "mother love" in Cap Hanson's right cross!



ROMANCE OF THE ELEMENTS... Beryllium

GEOMETRY FURNISHED THE CLUE THAT LEAD TO THE DISCOVERY OF **BERYLLIUM!** WHILE STUDYING CRYSTALLINE FORMATIONS, THE MINERALOGIST, ABBÉ RENE-JUST HAUY OF FRANCE, STRUCK BY THE GEOMETRICAL SIMILARITY OF BERYL AND THE EMERALD, INDUCED THE CHEMIST, VAUQUELIN TO CAREFULLY ANALYSE THESE MINERALS CHEMICALLY. INSPIRED BY HAUY'S FINDINGS, VAUQUELIN, IN 1798, DISCOVERED THE NEW EARTH, AND SHOWED UP ERRORS MADE PREVIOUSLY IN BERYL AND EMERALD ANALYSES.



NINETY-TWO YEARS ELAPSED

AFTER WÖHLER, IN 1828, ISOLATED METALLIC BERYLLIUM IN POWDER FORM, BEFORE A MOLTEN METAL WAS PRODUCED THAT COULD SUCCESSFULLY BE CAST. IT WAS HANS GOLDSCHMIDT AND ALFRED STOCK OF GERMANY WHO, IN 1920, PRODUCED INGOTS, ELECTROLYTICALLY, WHICH AFTER REFINING CONTAINED 99.5% BERYLLIUM.

**A
METAL
OF
TOMORROW!**

POPULAR

IN PLANTS AND SHOPS EXPOSED TO EXPLOSION HAZARDS ARE NON-SPARKING TOOLS MADE OF BERYLLIUM COPPER. GERMAN AIRCRAFT ENGINES UTILIZE BERYLLIUM NICKEL. AMERICAN AIRPLANE MAKERS LIKE BERYLLIUM COPPER FOR INSTRUMENTS THAT MUST "STAND THE GAFF." MANY INDUSTRIES ARE LEASING IT OR WATCHING IT WITH INTEREST.

Beryllium is number 4 in the International Table of Atomic Weights. Its symbol is Be and its atomic weight is 9.02. It is an extremely hard metal, silvery in color, and weighing less than aluminum. It is a member of the magnesium family, related to cadmium, mercury, magnesium, zinc, etc. It is also called glucinum. It can be prepared as a powder but it appears commercially as a metal. Alloyed with

**\$15.00
\$100.00
A POUND**

FROM MORE THAN \$100.00
A POUND TO ABOUT \$15.00
A POUND IN ALLOY, WITHIN A DECADE; FROM A TRULY RARE ELEMENT IN THE 1920'S TO A COMMERCIAL PRACTICAL METAL TODAY—THAT'S THE AMAZING STORY OF BERYLLIUM!



THE ANCIENT EGYPTIANS, IT IS SAID, HAD A SECRET WAY TO HARDEN COPPER, BUT IF THIS ART EXISTED, IT WAS LOST AGES AGO. TODAY, VERY LITTLE BERYLLIUM ALLOYED WITH COPPER, GIVES THAT SOFT METAL A HARDNESS COMPARABLE TO THAT OF TOOL STEEL; MAKES NICKEL TOUGH AND HARD. BARELY 2/3 AS HEAVY AS ALUMINUM, PURE BERYLLIUM HAS VIRTUALLY THE HARDNESS OF TEMPERED STEEL.

steel, it becomes an agent against rusting, in addition to providing a great hardness and tensile strength. It is coming into great use in cutting tools, reducing wear, and retaining sharpness to a much greater degree than ordinary tool steel. It is a metal admirably adapted to the airplane industry because of its light weight. Most recent finds point the way to making it available to builders.



THUNOR FLEES THE DEVILS

BY RUSSELL STORM

THE shrill cry of the hunting hawk, coming down wind from the tall cliffs overhead, lifted Thunor to his feet. One lithe step took him to the entrance of the cave, where he stood looking up with narrowed eyes.

The valley was a knife gash filled with shadows. Overhead the rays of the descending sun illumined the tall pines and the jutting spires of rock on top of the cliff. Thunor listened, a bronzed, fur-clad giant of a man, the whole six feet, two hundred and twenty pounds of him tensely alert.

Around him he heard the rasp of moccasined feet on stone as other members of the cliff community came from their caves. They were silent. They waited for Thunor to speak or to act.

The hawk cried again. No, it wasn't a hawk. It was Tomess, up there in the pines at the top of the cliff, and his cry was a warning signal of danger.

Peril was no new thing in this community. It was everywhere in this fierce land. To the north there

was danger—the great cold was there. Here in these rugged, rocky hills lived great bears and huge wolves and sneaking cat-lions. Southward, there was even greater danger. Devils that flew through the air came up out of the south.

Devils that were worse than the bears and the wolves and the cat-lions. Devils worse than the famine that came in the winter when game was scarce. Devils worse than the forest fires, worse than hunger, worse even than death itself.

Each spring they came north and hunted through the hills, for something known only to themselves. What they hunted, the cave dwellers did not know. It was not food. It was—something quite different. They continued their search until winter came, and then they returned to the mysterious south.

Thunor heard Tomess' cry come keening downwind the second time. The bronze giant turned then into his cave. From a rock ledge he lifted his great bow. All over his back the straining muscles twisted

There was only one way for Thunor to save his tribe from extinction, and it wasn't in flight. He turned back to fight



Thunor hurled the heavy metal brick with all his strength

into knots. The bow string, made from the gut of cat-lions, thrummed fiercely as it felt the tension of the wood.

Thunor took a sheaf of arrows from the rock shelf, examined their feathers and their points. They were tipped with metal. It was a soft metal, but it was better than the flint-heads the tribe had used in the past. Thunor knew it was better. During the winter he had found a great supply of it hidden in a secret place, had learned how to pound it into arrowheads and heavy axes.

As Thunor went up the narrow trail the men of the tribe called to him, asking him if he needed their support.

He shook his head. "First I will see what the danger is. Then I will call if I need you."

The women clucked to him to be careful, to take no chances.

"Take care, Thunor," his own mate called after them. "If you do not return, who will protect us from the wolves and the cat-lions? Who will bring meat for the children?"

At the top of the trail, Tomess awaited him. He was young, not yet a man. Nor would he ever win recognition as a warrior, because his left arm, his bow arm, broken in an accident, had never regained its full strength. But Tomess was very fleet of foot, and his eyes and his ears were the best in the tribe. That was why he had been detailed to mount watch from the top of the cliff.

"What is it?" Thunor asked him.

Tomess pointed toward the southeast, Thunor following the line of his arm. In the sky a light flashed, as of sunlight glinting from bright ice. It glinted again. Listening, the bronze giant realized he could hear a sound.

THERE was no fear in Thunor. Nothing that walked the face of the earth frightened him—except this one thing. And it did not walk over the earth.

"The devils that fly!" he said, the words growling in his throat. With the coming of spring, the devils had returned to their grisly search.

Thunor's tribe had lived in these hills south of the great river for two generations. His father had led the last tribal exodus southward. Before the little band had come here, they had not known these flying devils existed.

"Watch here, Tomess," Thunor ordered. "Call twice if they come near."

He went back down the hill, to where the tribe waited.

"The devils from the south have come again," he said simply.

Occasionally in the past the devils had captured cavemen, had no doubt questioned them. None of the tribe knew the questions that had been asked—although each time they had found the bodies of the men who had been captured.

Those limp corpses were another reason why Thunor hated the devils. They killed wantonly, without needing the flesh for food. And if they caught even a glimpse of a skulking caveman, they slew him just for fun.

A little stir of apprehension ran through the tribe. The women looked quickly toward their children. But the men muttered angrily, gripping their weapons.

"We will destroy those devils this year," they growled. "We are strong now, with our new axes and our arrowheads, and mighty Thunor leads us."

"No," Thunor told them. "They have weapons that kill with a puff of light. We can't stand against them. Not this year. We must leave our caves and hide in the hills until they are gone."

The tribe muttered. Leave their warm caves! It was still early spring, and there would be ice and snow before the summer came. They would freeze. Besides, they now numbered forty fighting men.

"Am I the leader?" Thunor demanded. "Am I the headman here?"

"Yes, Thunor, yes! You are indeed the leader!"

"Then obey me!"

Thunor's forceful command sent the women scurrying to follow orders. They began to gather their cooking pots of baked clay, their sewing needles and fishhooks, made of bone. The children saw the fear of their elders and ran to help. Not a child whimpered.

Without delay Thunor sent the men to collect their extra weapons. He himself stood in the flat space in front of his cave, listening to the drone in the sky. It could be heard plainly now.

"We'll go to the west," Thunor directed, detailing an advance guard of ten men to lead the way. Twenty he sent to aid the women. The remaining ten he kept with him.

"Put out all fires," he ordered. "So the smoke may not betray us."

When it was done, Thunor ordered the tribe to march. In the gathering shadows of the coming night, the little cave community began moving up the valley, away from their cliff homes, toward the trees and the rocks where they would be compelled to skulk all summer, not returning to their caves until the winter drove the devils south again. Thunor, listening to that unearthly drone in the sky, shouted to the tribe to move faster.

Abruptly from the cliff the hawk's cry came again, to be instantly repeated.

"Faster!" Thunor shouted to his people. "Run for your lives!"

Then he cursed himself. The order had been given too late! The devils' sky ship—a fat, fishlike affair that flew without wings—suddenly appeared over the cliffs. Now it was passing directly over the valley, over the tribe.

"Down!" Thunor roared. "Don't move!"

Stretched flat on the ground, Thunor watched the big sky-fish in which the flying devils rode. Would they see the tribe, down here in the shadows?

The ship was moving slowly. It was so near that Thunor could see faces peering out of the round holes in its sides. Now—now it was passing by overhead. The devils hadn't seen the tribe! The little cave community was safe. Thunor, giant of a man though he was, dared to breathe again.

A FALLING stone rattled down the cliff. Turning his head, Thunor saw Tomess slipping down the trail. He hissed at the youth not to move. Simultaneously the drone of the ship died away. In the heavy stillness Thunor could hear the hoarse breaths of the frightened men. They were safe, then—

No, they were not safe! The ship turned, nosed downward. It was coming toward the helpless little band. The devils had seen Tomess on the trail!

A woman screamed then. Thunor leaped to his feet. "Run!" he yelled. His rearward he ordered to stand with him.

The ship was very near now, nosing downward at a steep slant. The rearward eyed Thunor with panic on their faces. Grimly their leader fitted an arrow to his great bow.

"We must let the devils attack us," he growled, "so the tribe will have time to escape. That is our only chance."

When the arrow was drawn full back, Thunor released it. The bow string thrummed and the narrow shaft screamed in its flight. It struck the sky ship fair and square, and glanced off.

For a moment Thunor had hoped that the new arrowhead would penetrate the devil ship. But it failed to do so.

The air was heavy now with the throbbing of tribal bowstrings. A barrage of pointed shafts leaped outward. Leaped, and fell short. Only Thunor's great bow could speed an arrow that far. And Thunor himself was releasing shafts as fast as he could notch the arrows. The sky ship came on, heedless of the rain of arrows directed against it.

A pencil of light leaped from its nose. The man standing beside Thunor screamed, threw himself forward to the ground, kicked convulsively once, and died.

Thunor muttered bitterly, released arrows in a flashing stream. The metal tips struck the great ship, glanced away. Other arrows were striking it now, as it came nearer. And the beam of light lanced out again. And again and again. It winked off and on, like a baleful eye. Each time it flashed out a caveman screamed, died horribly.

Thunor knew then that he had to create a diversion so the tribe could escape. If men died here, it was so others might live. But men were dying too fast. Thunor glanced over his shoulder, saw his people scattering frantically toward the pines.

He yelled to his guard to run. Three obeyed him. But when they reached the shelter of the pines, only two were at his side. The third had been slain on the way.

AN hour later, the tribe was hidden under an overhanging cliff. The devils had not pursued them. The devils never pursued cavemen—merely enjoyed themselves by shooting them.

Deep darkness had fallen. Thunor, who knew the names of every member of the tribe, called them off slowly. Eight failed to answer. Eight would never answer the rollcall again. Eight had died forlornly in their tracks.

Tomess did not answer. Thunor called again, to make certain no mistake had been made. But Tomess was not present. None had seen or heard him; and being fleet of foot, he would have kept up with the tribe.

So Thunor himself turned back toward the caves to search for Tomess. But before he left he ordered the tribe to continue westward. The little band wailed when he left them, but he commanded them gruffly to be silent and refused to take any of the warriors along for protection. Finding Tomess was Thunor's own perilous task.

He slipped the great bow over his shoulder, took his axe in hand and slid away into the darkness, moving for all his strength as silently as a shadow. Before he approached the caves he gave the call of the owl.

"Whoo! Whoo-o-o-o!"

Tomess did not answer. If he had heard, he certainly would have replied. He knew the calls like his own name—a hawk by day, an owl by night.

Thunor moved on through the darkness. Beneath his breath he cursed the devils. Why must they come north every spring? What did they search for here in these hills south of the river? Thunor did not even pretend to know.

Last summer, after the little tribe had fled from their caves, Thunor and several of the young men had returned to spy on the devils. The sky fiends had gone along the valleys, setting up strange instruments. Obviously they had been making magic, but their magic seemed always to have failed. The devils investigated every cave, every crevice in the rocks. They seemed especially interested in caves—

THUNOR called out to Tomess again. "Whoo! Whoo! Whoo-o-o-o!"

No answering cry. Soon Thunor was so near to the caves that he did not dare call. He could see lights now. Moving closer, he saw the devils had landed their ship in front of the cliff homes. The suns in the ship were shining brightly.

Then Thunor saw why Tomess had not answered. *The devils had captured him!*

Thunor growled bitterly. He had seen these fiends before, knew they looked a little like men. They were thinner and scrawnier than real men, their legs were reeds, and there was not enough strength in the arms of a dozen of them to bend the great bow. Yet the very sight of them always made Thunor sick.

There were—he counted slowly—ten of them. They were dancing around Tomess; Tomess, scared

and trembling, who sat on the ground, his eyes staring wildly from face to devilish face.

It was the first time Thunor had ever seen the devils excited. They were yelling at each other and at Tomess.

"E lies. I tell you the cavie lies. Where is four knocks, cavie?"

Tomess shook his head. "I don't understand," he wailed.

"You do understand!" the devils jabbered. "You have found four knocks. Don't deny it."

"But I don't understand," Tomess pleaded. "I don't know what 'four knocks' is."

One of the devils held something in front of Tomess. "This is from four knocks," he yelled. "Now where is it?"

Thunor, watching the bewildering scene from the darkness, gasped when he saw what the devil held. One of Thunor's arrows!

So that was the thing that had made the devils so excited! Could it be the sky fiends were looking for arrows, Thunor wondered. He couldn't understand. They had no use for arrows. Their weapons were magic.

Then his attention was again riveted on the scene below him.

"That is an arrow," Tomess explained uneasily. "One of Thunor's arrows. I don't know what you want when you tell me it came from four knocks. It came from Thunor's bow. He made it."

This made the devils angrier than ever. "Won't talk, eh?" one of them shrilled. "We'll see whether you talk or not!"

Thunor could not catch what the fiend did, but a beam of light flared from an object the devil held in his hand. When the light touched Tomess, the youth screamed. He tried to leap to his feet, but the devils grabbed him and held him while the first devil played the light over him again.

Thunor flinched every time Tomess cried out. In all his life he had never been so angry. He knew now what real hatred was. He hated the cat-lions, because they were sneaking. He hated the famine, because then the children cried all night. He hated the snow, because sometimes the tribesmen froze in it. But the hatred that raged through Thunor when he saw the devils torturing Tomess was stronger than any emotion he had ever known. It was an overwhelming passion.

Growling, Thunor fitted an arrow to the great bow. "Run, Tomess!" he shouted and loosed the shaft.

The devil that had been torturing Tomess sprang erect at the sound of Thunor's voice. The arrow that had been aimed at his chest struck him instead full in the thigh, knocking his legs out from under him. He fell flat on his face as the other devils leaped to their feet.

"Run, Tomess!" Thunor shouted again, loosing another arrow.

Tomess needed no urging. All he needed was a

chance. Like a frightened deer fleeing from wolves he was on his feet and running.

Thunor's second arrow struck a devil in the throat. The creature went over backward, clawing madly at the winged death that had leaped at him out of the night.

"Into the ship!" one of the devils shouted. "But first—"

HE pointed something in his hand at Tomess. An arrow of light leaped out, flicked at Tomess between his shoulders. The youth leaped up, fell and turned a dozen somersaults. When he stopped rolling, he did not move again.

Thunor raged. He had seen deer collapse as Tomess went down. When the long-ranging arrows struck their hearts, they fell like that, too.

Eyes aflame, Thunor made his great bow thrum again and again, but the devils were running now and the metal-tipped shafts missed. The sky fiends jammed through the door of the ship, kicking at each other in their haste to get inside, a scrambling, clawing, hysterical mass, arrows rasping among them until the door closed with a loud clang.

Two remained outside. One of them lay unmoving, an arrow through his throat. But the other, with an arrow in his thigh, was not dead. Begging for help, he had crawled after his fellows. Reaching the door of the ship, he got his hands on the threshold, tried to pull himself inside. From within, the door had slammed in his face.

The ship roared, started to rise in the air. Frantically the wounded devil clung to the door, screeching to be taken inside. But the door remained closed. Callously, the devils ignored their comrade's pleas. His fingers slipped. He yelped like a beaten dog as he fell through the widening space—

Brilliant suns, flaming from the ship, searched for Thunor. They did not find him, because he was gone. As he fled through the night, he knew the devil ship was following close behind. The devils were seeking him, he thought, because he had killed two of them. Later, Thunor was to decide they were seeking him—or any of the tribe they could catch—for another reason.

As the ship passed overhead, Thunor ducked into a natural cavern between a boulder and a fallen log. The devils did not see him. When the ship was gone, he came out of his hiding place.

So he had evaded them. Well, he could always evade them. Then a new thought struck him. The devil-ship was moving westward. The devils wouldn't find him there. *But what if they found the tribe?*

THEY did find the tribe. Beams of light, fingering hungrily through the darkness, caught two of the cave dwellers in the open. The tribe tried to flee by breaking up and scattering into the darkness. Most of them succeeded in getting away. But three were caught. No, they were not killed. They were

taken screaming into the ship—which was the same thing.

How the devils caught them was not clear, except that they worked a magic that made men mindless. The three were fleeing with the rest of the tribe. Suddenly, as a strange light touched them, they stopped running—and started following the ship as it floated over the trees. When it descended to earth the three tribesmen, walking like men in a dream, went up to it. They stumbled dazedly through the open door—and that was the last seen of them. . . .

Thunor heard the story from a shivering tribesman who had answered his returning owl hoot. The bronzed leader gathered his tribe together, sent them hurrying westward, intent only on escape.

But the sky devils would not let them escape. Long before dawn their ship was howling overhead again, its lights making the night as bright as day.

Thunor hid the tribe, but the devils searched them out. Again they scattered into the darkness, and again most of them succeeded in escaping. Four did not. Four halted in their mad flight as a finger of light touched them. Four tribesmen, their minds no longer their own, turned and walked along a path parallel with the ship overhead.

Thunor rallied the remainder of his tribe, grimly sent them toward the west.

After a harsh night, dawn broke forth in a blaze of blood-red glory. And with the dawn the devils came again, their ship howling like a gigantic wolf on the hot scent of escaping prey. When the devils captured two more helpless tribesmen and carried them off, Thunor knew at last that the fiends were not following them merely to exact vengeance.

No—the devils were following them for another reason. They *wanted* something, and they would pursue until they got it, or until the last tribesman was dead. Thunor realized what the devils wanted, and what would happen if they did not get it—and what he had to do.

BREAKING the tribe into small groups, he said, "Take different trails."

His last command was, "Continue to the west," and he said the words gruffly.

The tribe hesitated. "What of you, Thunor?" they asked. "Where do you go?"

"I go to parley with the devils," he said. "To bargain with them."

Steeling himself against the unhappy protests, Thunor turned back to the east, toward the place where the ship had landed to take aboard its last two captives. The tribe watched him forlornly until he was out of sight.

This was Thunor. He was the headman. The tribe looked to him to save them and their children. If he gave his life that the tribe might live, it was no more than his duty as its leader. So Thunor went to the devils, to save his people.

When he saw the ship, resting in a little glade, even

his stout heart quailed a little. The devils had magic, powerful magic. He had only his great bow and his axe, and a great heart. He knew that the bow and the axe were worthless against this devil-ship. Well, he would use his heart and his head, then.

He walked resolutely forward, and when the door of the ship was opened and two bodies were kicked out, he knew beyond any doubt what would be his reward if he failed. Those two bodies thrown from the ship, like carrion tossed for the wolves to find, were the last two captured tribesmen.

His jaws set in a grim line, his gray eyes flashing fire, Thunor walked forward. The ship roared, started to rise. The devils had finished with their two victims. Now they sought more.

Thunor ran. He must stop them before they found the tribe again.

Into the open he stepped. "Ho, devils!" he called.

The ship stopped rising, hung suspended in the air, a bare yard off the ground. Behind the round openings in the side, Thunor could see faces watching him. A beam of light turned toward him, focused on his body with a merciless illumination. Thunor blinked, but the beam did not destroy him, as he had half expected. Silently the devils watched.

Thunor laid the great bow on the ground, the axe beside it, swung the quiver of arrows from his shoulder. Weaponless, his hands in the air, he stepped forward.

"Ho, devils!"

WHAT if they blasted him now? What if they suspected treachery? Since they were devils, he knew the first thing they would suspect would be treachery.

Round tubes swung around to point at the bronzed leader. He had seen arrows of fire leap from those tubes, had seen men die as the fire touched them.

Sudden sweat dripped down over his face, but Thunor did not dare lower his hands to wipe it away, lest the devils misinterpret the movement. Courageously he walked forward. The tubes moved to point at him. But the devils still watched.

"Ho! I came to talk to you." Thunor rapped against the door. "Open up!"

Inside, he could hear them squealing to each other. "It is a trick. These cavies are not to be trusted."

"—blast him!"

"—the only good caviae is a dead caviae!"

Another devil protested: "I see no others. And he laid down his weapons."

They quarreled about opening the door. Thunor waited, and the sweat grew on his face. What if they decided it was a trick?

"Ho, inside!" he called. "I come to show you four knocks."

Instantly the quarrels ceased. There was magic in those two words, magic that made the devils open the door in a hurry.

Ignoring the evil weapons they had in their hands,

Thunor swung into the ship. Momentarily he breathed easier. He was inside. He had not been destroyed—yet.

"You came to show us four knocks, cavie," one of the devils demanded. The questioner was portly for a devil, and if he had been a caveman his name would have been Big Belly.

"You know where four knocks is? The others have lied to us, saying they did not understand. We know they lied. You have found four knocks. Here is proof that you have found it—so don't lie, cavie!"

"I do not lie," said Thunor. "Yes, I have found what you call 'four knocks.' And I will show it to you—if you will spare my people!"

THAT was Thunor's bargain. He would show the devils how to find the four knocks they had sought in these hills for so long, if—if in return they would not molest his people further.

He had realized what "four knocks" was—the metal out of which he made his arrowheads. He had found what the devils had searched for and had been unable to locate. *They had found his arrow.* That was why they had followed his tribe.

The metal he had found; the metal that made better arrowheads than flint; the metal that had been his gift to the tribe; the gift that should have made his people stronger—this gift had brought death instead.

"E says he knows where four knocks is!" Fat Belly gasped. "Take us to it, cavie. Hurry!"

"First," said Thunor, "you must swear not to harm my people."

"People!" the devils laughed scornfully. "Your kind are not people. They are animals. *We* are people!"

"Animals or people, they are mine," Thunor answered. "They look to me to save them. And if you do not promise to spare them, I will not show you where the four knocks is hidden," he finished defiantly.

At first, the devils were angry because this animal dared to defy them. Some of them screeched that they would make him talk, fingering the things they held in their hands. But they looked again at the caveman, and those who looked at Thunor's eyes became uneasy.

"E will not talk. E will die first."

"Let us promise what he wants," Fat Belly said. "Just so he takes us to four knocks."

"Do you swear it?" said Thunor firmly.

"Yes, yes, we swear it," Fat Belly answered impatiently. "We will swear anything you wish. Now take us to four knocks."

Thunor suspected the devil was lying, but he saw the weapons they were fingering and he realized fully he was in their power. Besides, he could not be sure they were lying.

"Very well," he said grimly. "You have sworn an oath. I will keep my part of the bargain. See that you do likewise."

THE devils were almost too excited to take the ship where Thunor told them. Fat Belly was especially excited. He continually licked his thin lips with a pink tongue like a glutton looking for more food.

Thunor directed them to land the ship beside a narrow gulch cut by water-deep into the red soil of a hill. The devils piled after him as he slid down the steep side of the gulch, into a damp hole in the wall at the bottom.

At the back of that hole was the stuff that the devils called "four knocks" and which Thunor used for his arrowheads. The yellow bricks were everywhere. The devils gasped when they saw them.

"This is four knocks! The cavie has found it."

"The old legend was right! Four knocks was here, south of the river. As I contended, the topography of the country has changed so much, we could never have located it from the surface."

The devils made lights and ran everywhere in the depths of the cave, calling out gleefully to each other.

"Billions here! Billions and billions! We will be rich, rich, rich!"

Thunor watched. He could not understand at all. He knew the stuff they called "four knocks" made better arrowheads than flint. But other than that, he could not see it had any particular value. Yet the devils seemed to think it was very valuable. Perhaps they made magic from it, he decided.

They fell on their knees before the stuff, kissed it, hugged it, worshiped it. Perhaps it was their god, Thunor thought, turning disgustedly to leave.

A SHRILL voice told him to halt. Fat Belly was shouting at him.

"I go," said Thunor, "to join my people." All over his body, his muscles tensed. If these devils tried to stop him now—

"Good," said Fat Belly. "Good."

The devil yelped at the others, and Thunor relaxed. They had not tried to stop him.

"Good," Fat Belly repeated. "Bring your animals here. We need them."

Thunor's mouth dropped open. He closed it with a click.

"You need them? What for?"

"These bricks are too heavy for us to carry. Your animals will do the work for us."

"Too heavy for you to carry!" Involuntarily the words leaped from Thunor's lips.

These devils were weaklings, degenerates. True, the bricks were heavy, but Thunor could carry two in each hand and not know he had a burden. The devils could not move even one of them. Now they would force his people to do their labor for them.

"No!" said Thunor flatly.

"Yes, you will, cavie," Fat Belly said, angrily raising his weapon.

Thunor faced them. "You have sworn not to molest my people. You promised on your oath. I have shown you 'four knocks' and my bargain is complete.

I did not bargain that my people should slave for you."

"Bah! What is a promise? We will take you in our ship. You will bring your people here, or—" Fat Belly fingered the weapon suggestively.

"Or what?" Thunor roared.

He crouched and leaped in the same instant. Leaped toward the devils. They had broken their word, they were trying to make slaves of his people. If he could get close enough to get his two hands on them, there would be a different story.

"Or *this*!" Fat Belly snarled, aiming his weapon. A blaze leaped from the thing, leaped faster than even mighty Thunor could move. It caught him full in the chest.

A sudden torture cut through the bronzed giant like a knife, doubled him over, drained the strength from his limbs. He tried to force his body forward, but his legs buckled under him and he fell to the ground, groaning. The blaze of light was agony, but even worse was the knowledge that he had failed his tribe.

"Now, covie," Fat Belly rasped, bending over him. "Will you bring your animals here?"

"No!" Thunor whispered from bloodless lips. "And you cannot find them, either. By now they are hidden so that even devils cannot smell them out."

He hoped it was the truth. The tribe, traveling in small groups, would indeed be hard to find. Some of them were certain to escape.

Fat Belly hesitated. He had intended to destroy this caveman. Thunor saw it in his eyes. But he changed his mind. The devils crowded around him.

"Let this covie carry the bricks for us," one of them suggested. "After he has finished, we will destroy him."

THUNOR slaved. His massive thews groaned under the weight of the yellow bricks. Meanwhile the devils quarreled.

"Half is mine," Fat Belly insisted. "You remember our agreement when I financed the expedition this year—I was to have half."

"No, no," another devil protested vehemently. "Remember it was I who interpreted the old legends many years ago. If I had not solved the legends, we would never have looked for four knocks. I am entitled to half."

"Share and share alike," the others argued. "We have risked our lives in this cursed wilderness the same as you. We are entitled to an equal share."

"But my costs!" Fat Belly wailed. "And our agreement!"

"That agreement doesn't go now."

"And my interpretation of the legends—"

"To hell with the legends. Share and share alike, or else—"

THEY fingered their weapons. Fat Belly and the one who had interpreted the legends yielded only when they saw their lives were in danger. They were very angry, and their mutual distrust was so great that

the whole group followed Thunor each trip, to make certain that no devil forced him to secrete one of the bricks.

They ceased following him only when their strength gave out. Then two of the devils stayed in the cave, to watch Thunor and each other. Fat Belly waited just outside the cave. The rest strung out in a line to the ship, arranging themselves so they could watch each other at all times.

Thunor slaved. It would take a long time to carry all the bricks from the cave. The devils would not let him rest a moment. And when he finished, Thunor knew he was doomed.

Well, he had saved his people, anyway. By now they must be far away. They would find a land which the devils never invaded. There the tribe would grow into a mighty community. Perhaps some day they would learn magic and make ships that flew through the air, and mighty weapons. No devils would ever dare molest them. Thunor knew sadly that he would not live to see that day.

No, there was no chance to escape. He would die. But that did not matter. The tribe was safe, and that was the most important thing. What was one life—

Then it happened! Thunor was just coming out of the cave when he heard the sound. He recognized it instantly—the throb of a bowstring. No, not one bowstring. Many bowstrings, released at the same instant!

From the edge of the gulch a flight of arrows leaped. Arrows! Thunor's heart surged with a tremendous hope. The tribe had followed him! They had disobeyed their leader, in a brave effort to save him. They had come to fight the devils, to free the bronzed giant from a fate worse than death.

For one mad moment, when the flight of arrows leaped from ambush, Thunor was proud. His people were facing a terrible death to rescue him. As he would die for them, so they had come to die for him. He was so proud of them, so glad to be the leader of such a tribe, that his eyes filled with tears.

"Fight!" Thunor roared hoarsely. "Smash these devils!"

Dropping the bricks, he leaped away and began to scramble up the side of the gulch. He was going to join his people, to lead them, to fight beside them.

With wild exultation he saw what happened as a result of the first flight of arrows. The shafts had all been directed at one target, the devil nearest the ambushed tribesmen. All over the fiend's body little tufts of feathers suddenly sprouted as the arrows drove into him. That devil died, then and there.

Suddenly four devils raced for the ship.

"Don't let them get to that ship!" Thunor shouted.

Arrows screamed through the air again. One devil fell; then another. Thunor saw two of them racing toward the ship. He fought his way up the gulch then. Another leap and he would be safe—

It was a leap that was never made. Fat Belly was firing from the protection of the cave mouth. Thunor

felt something touch him. His legs buckled. As consciousness faded, he knew he was falling, falling hard.

BLACKNESS swirled before Thunor's eyes. When it began to fade away, he could hear the shrill piping voices of the devils. Painfully he opened his eyes. He saw that he had fallen back to the bottom of the gulch. His people were all around him.

In the air, the huge ship droned spitefully. Two devils were landing it at the bottom of the gulch. Fat Belly and the two remaining devils had come out of the cave and were guarding the forlorn tribesmen. That is, what was left of them. He could see bodies scattered along the edge of the ravine. Evidently the little band had charged. With ruthless abandon the devils had killed many of the tribesmen and rendered the others senseless.

"You disobeyed me," Thunor growled. But there was no anger in his throat.

A moment later the devils landed the ship. Two remained inside. Two others went back into the cave. Fat Belly took up his position just outside the entrance. Only five devils were left now; five warped, cold-blooded fiends.

"Get busy, cavies," Fat Belly ordered. "And no nonsense, or I'll blow you apart."

Guarded by the devils, Thunor and his people began carrying the yellow bricks from the cave. The devils were intensely suspicious now. They watched every move the cavemen made. But they were not angry because the cavies had killed three of their number. They were rather pleased about that.

"Three less to share with," Fat Belly said, in a satisfied voice.

Then, because one of the tribesmen was only a boy and could not carry even one brick, Fat Belly calmly destroyed him.

Thunor almost went berserk. He started to charge the devil, but Fat Belly used his terrible weapon again, and Thunor's strength was drained away.

When Fat Belly released his weapon, Thunor went back to work. He picked up the bricks again. Now, as never before, he knew how terrible the devils were, how ruthless. He had to save his people. But how? How could they escape when inside the ship two devils were constantly on the watch? Fat Belly waited at the cave mouth, a weapon in each hand. And inside the cave were the remaining two devils.

If the tribesmen tried to run, the devils would mow them down. Even great Thunor, who could break a devil in two with one hand, was not stronger than the devils' magic weapons.

Then Thunor thought of something. It had been before his eyes all the time—there was one weak point in the devils' artificial armor. A plan began to form in Thunor's racing mind.

If it would only work! It *had* to work. It was their only chance. If it failed, the women and children of the tribe would have to fight the bears and the wolves and the cat-lions without their men to help

them. For their men would be dead.

Each time he had a chance, Thunor whispered to his comrades.

"Be ready when I give the word."

They passed his message along. "Be ready when Thunor speaks! Great Thunor will save us. He will tie these devils into knots, will Thunor!"

A new light kindled in the hopeless eyes. Lagging spirits again knew the thrill of things to come. Thunor saw how his men believed in him. He could not fail them. He must not!

And so, each time Thunor was in the huge sky ship, he did something. He did the same thing at the mouth of the cave and again inside it.

The tribesmen watched tensely as they worked. Thunor continued his regular trips from the cave to the ship, burdened each time with four bricks. Every second the tribesmen expected him to roar at them to seize the nearest devil. But he didn't do that. He didn't do much of anything—except wait.

Nothing seemed to happen. But the cavemen realized with a thrill that something was about to happen! For the devils were becoming even more nervous. Fat Belly was always looking into the cave now; from the cave to the ship. The two devils in the ship were becoming angry. The remaining pair in the cave were whispering furtively to each other.

WAS Thunor using magic to fight the devils? If so, when would the magic begin to work? But Thunor said nothing, except "Be ready!"

Then—then Thunor's magic began to work! Fat Belly was peering into the cave, sticking his head around the corner like a turtle watching warily for enemies. Suddenly a beam of light lanced out from the ship. It drilled into the red clay inches from Fat Belly. He heard its hiss, jerked his head around with a screech, saw what was happening and ducked into the cave.

Almost instantly he came running from the cave, firing back over his shoulder. Just as he emerged, he saw the tubes of the ship pointed at him. He leaped to one side, cursing, and took refuge in a gully.

Then the tribesmen saw why Fat Belly had run from the cave. The two devils—his own comrades—were after him. They came leaping from the cave, firing at Fat Belly, and they emerged just in time to run into the beam of intense light that flared from one of the ship's tubes. The deadly ray caught one of the devils full in the chest. Like a tree struck by lightning, he burst instantly into flame.

The other devil fired at the ship. A round hole appeared in the metal hull as the ray struck it. Then the fiend fired again, the ship answered, and the second of the devils died—horribly.

"Now is the time!" Thunor shouted. "Run!"

The tribe obeyed him. They fled in every direction. As they ran they heard the ship roar as it started to rise into the air.

Thunor did not run. He knew that if the ship got

into the air, the little band's chance of escape was gone. And the ship was rising ever higher from the ground each second.

The bronzed giant had just come out of the cave. He had four bricks in his hands. He dropped three of them. Grasping the fourth one in both hands, he ran—toward the ship!

It was rising slowly. Evidently the shot from the devil-weapon had damaged it so that it could not lift as rapidly as usual. But it was going up, a foot at a time, and as it rose the tribesmen's chances lessened. From its nose white beams were frothing as one of the devils fired at Fat Belly. The other devil operated the controls.

Thunor could see the fiends. And they saw him. The tube swung around viciously to point at him. It was now or never. Thunor lifted the yellow brick over his head, hurled it with all his strength.

The hull of the ship would deflect an arrow, but the brick was far the heavier, and it was hurled with all of Thunor's massive strength. Not for nothing was the bronzed giant named Thunor, the great bear that growls in the sky, the thunder. The brick struck squarely in one of the round ports. It shattered the glass, passed through, caught the devil who was operating the tube.

Backward the fiend staggered, reeling heavily across the ship. He crashed into the devil who was working the controls. The huge ship spun in a circle, zoomed up, completely out of control—and smashed up full on its nose in the bottom of the gulch.

The explosion that followed rent the heavens and the earth. Thunor was already running when the detonation sounded off. The blast lifted him from his feet, slammed him forward, rolled him over and over. His head struck a rock, and a million stars flashed weirdly before his eyes.

WHEN Thunor recovered consciousness, the tribesmen were all around him. He struggled shakily to his feet.

"Where is Fat Belly?" was his first question.

A tribesman pointed. Thunor looked. There was a great hole in the earth where the ship had struck.

"The explosion blew Fat Belly forty feet, Thunor!"

The bronzed giant sighed. Suddenly he felt weak all over. He sat down, and his people crowded around him.

"Mighty is Thunor," they said. "Great is his magic. It makes the devils fight among themselves. Truly a wonderful magic!"

If this had been a few thousand years before, Thunor would have blushed. As it was, he looked decidedly uncomfortable.

"Oh," Thunor protested, "it was nothing. I merely told the two devils in the cave that the other two in the ship and Fat Belly were planning to go away and desert them. Then I told Fat Belly that the two in the cave were hiding the 'four knocks.' He believed me, because that was what he would have done if he

had been in the cave!

"Next I told the two in the ship that Fat Belly and the devils in the cave were planning to destroy them, so that the 'four knocks' might be divided among only three. They were willing to believe me, because that was what they wanted to do themselves. But there was no magic in it. If the devils had been strong enough to have faith in each other, it would not have worked.

"But they were weaklings, each fighting the other man to see that he himself got the biggest portion—instead of all fighting for the same end. And their weakness destroyed them."

The tribe gasped. "Great is Thunor," they marveled. "He sets the devils against each other. But why did they seek this 'four knocks,' Thunor? Why do they value this yellow stuff so highly that they destroyed each other in order to possess it?"

Thunor shook his head. "I do not know," he said frankly.

The tribe was awed. Here was something that even great Thunor did not understand. It was a puzzle, a vast mystery.

"We will try to find out why they valued this 'four knocks' so highly," Thunor said. "Bring me one of the bricks. Perhaps magic may be made from it."

The tribesmen brought him a brick of the stuff the devils called "four knocks." Thunor studied it. If there was magic in it, he could not discover how to make the magic work.

He shook his head a second time. "I do not know."

But he did know one thing—the devils were dead. Now his people could return to their warm caves. Now they could live in this land in peace. Now they could stay in one place and grow into a mighty tribe.

Thunor looked into the future, saw his people rising as a strong and powerful nation. Perhaps, when the ice to the north went away, they could return and repossess the land from which the ice had driven them.

Yes, they would do that. It was Thunor's prophecy. The tribe would grow strong and mighty and live again in the land to the north. Ten thousand years ago dim tradition said the land had belonged to them. But that was before recurrent wars on the earth had wiped most of the population away in a holocaust of destruction. Only isolated villages, and one small section in central Europe had survived.

Thunor looked now at the brick. Faint marks had been indented on its surface. He wrinkled his brows in thought, wondering if those marks were magic. If they were, he could not understand them. Perhaps only devils knew their meaning.

He traced them out with a twig, so that they were clear and distinct.

98.9% pure gold. Fort Knox, Kentucky, assay.

"I wonder what those marks could mean," Thunor puzzled.

One of the tribesmen fingered the yellow metal.

"Huh!" he snorted disgustedly. "Imagine fighting over something like that!"

MYSTERY of the



THERE WAS A BURST OF FLAME, A CRASH, AND THE CAR PLUNGED THROUGH THE GUARD RAIL

WHITE RAIDER

BY THORNTON AYRE

THE summer evening had fallen with quiet calm over Manhattan Island when the flyer suddenly appeared. On the less densely populated outskirts of New York City, families on their apartment roofs, either reclining or taking supper, saw the flyer first as a tiny oval against the crimson flush in the west.

Nobody paid much heed. Flyers of various designs were common enough over this rearing supercity of 1990. Only one thing seemed queer. The flyer was not heading toward any of the 2,000-foot high directional towers which would guide it to the landing bases; and yet it was not lost. Its steady movement showed no sign of hesitancy.

Here and there men and women glanced at one another in surprise. Then throughout the entire block of apartments—known as Square 14—there was sudden consternation as the flyer came to a halt a thousand feet above.

Hundreds of pairs of eyes stared upward at a flat, aluminum-colored belly. A light of blinding amber winked momentarily within it—and then hell broke loose! Square 14—the entire vast cubelike

apartment block—split asunder with a tremendous din.

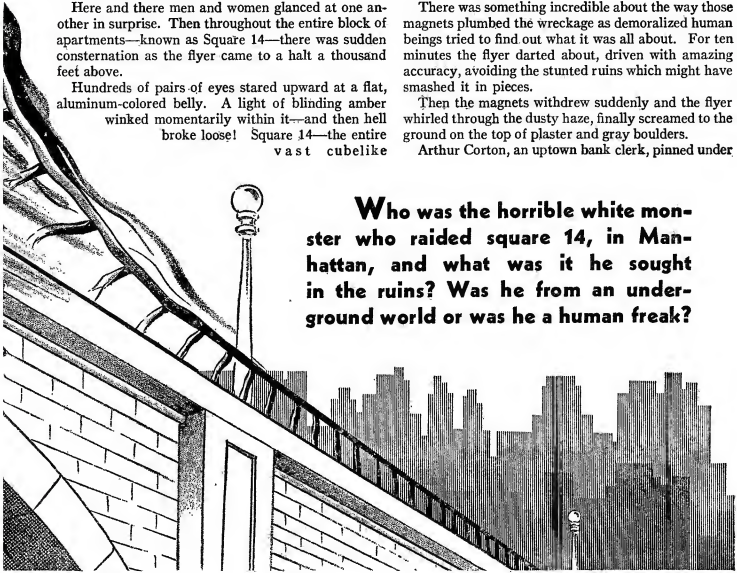
Bricks, steel girders, black glass facades, whole roofs even, mingled with the shattered bodies of human beings in a blast that shook the heavens. Avalanches of debris thundered back into the streets a thousand feet below. The calm peace of the summer evening vanished with diabolical suddenness.

Here and there trapped survivors in the wreckage caught a glimpse of the mystery flyer as it swept downward. But now, suspended from its base, were twin horseshoe magnets—magnets which dove into the wreckage with ceaseless purpose, magnets of tremendous heaviness which hurled many a running figure into eternal darkness.

There was something incredible about the way those magnets plumbed the wreckage as demoralized human beings tried to find out what it was all about. For ten minutes the flyer darted about, driven with amazing accuracy, avoiding the stunted ruins which might have smashed it in pieces.

Then the magnets withdrew suddenly and the flyer whirled through the dusty haze, finally screamed to the ground on the top of plaster and gray boulders.

Arthur Corton, an uptown bank clerk, pinned under



Who was the horrible white monster who raided square 14, in Manhattan, and what was it he sought in the ruins? Was he from an underground world or was he a human freak?

the wreckage by some miracle of fate had his head free. He was possibly the only man who saw what happened. Through the dust he glimpsed an open airlock in the ship. From it a figure slowly emerged. He was almost naked, save for a loincloth; human in outline, but of a doughy white color. His skin hung in pasty folds. His face was flatfish, almost bestial, with spreading nostrils and eyes as colorless as glass.

Corton struggled frantically to free his pinned legs. Failing, he lay there gasping as the mysterious individual scraped hurriedly amidst the ruins with a tiny magnet in each hand. The man came and went with desperate purpose; then all at once stopped and listened.

All of a sudden he raced back to his ship at top speed, jumped in and slammed the door. There was a titanic gust of hot air. The flyer lashed forward with staggering speed into the murk and deepening darkness.

Moments later a party of rescuers came plowing through the ruins.

"Here!" Corton shouted desperately. "Here! I'm being crushed to death!"

The rescue squad asked no questions, got immediately to work. As it proceeded Corton heard through his blur of pain the screech of alarm sirens, the blasting roar of stratosphere police planes, the distant crackle of static from electric guns slamming death charges into the upper heights.

MANHATTAN was prepared now—but the preparation was too late. The unknown craft had vanished utterly, and some seven hundred innocent persons were dead or brutally mangled. Then for Arthur Corton too the world was suddenly dark and quiet. . . .

Between spells of coma Arthur Corton was afterwards aware of faces grouped round his bed—grim, determined faces, and one in particular which reminded him of a granite statue. He recognized the blunt, stern features of Vincent Burke, head of the Scientific Investigation Bureau's homicide squad.

Burke was speaking in his clipped, purposeful voice. "You've been saying things, Mr. Corton—delirium, maybe; but if you can make it, I'd like to know more. Something about a ship and a man with doughy features—"

"That's—that's right." Corton breathed hard. There was damnable pain eating through his chest. In remote horror he realized he might never be sound again.

"I—I saw him—for a moment. About six feet tall, nearly naked, color of wet bread—"

In jerking gasps Corton went on to tell of the magnets, of the searching.

"I don't know who—" he started to say, and then he relaxed and became motionless.

Burke relaxed his lips and turned away, rubbing his heavy jaw slowly as his associates and the newsmen gathered round him.

"Exit the last survivor," he observed laconically, shrugging. "Come on, Sphinx, we've things to figure out at headquarters. No statement yet, boys," he added briefly.

"Sphinx" Grantham, his personal assistant, with features about as communicative as those of his stony superior, followed his chief out of the hospital. As usual, he made no observations. It was his job to answer, not to comment.

As the fast official car whirled the two police officials back through the traffic, the radiophone in the roof came into life.

"Calling Chief Inspector Burke."

Burke switched on. "Burke answering. Go ahead."

"Operator 9 reports further activity by unknown invader north of the city. In ruins of Square 14 again. Ambulance and rescue squads were overcome by gas and smoke barrage, but Operator 9 caught a brief glimpse of visitor. Six feet, white all over. Operator 9 took his frequencies on the detector.* Invader got away. That is all."

Burke switched off with a gloomy smile. He glanced across at Sphinx' overlong, expressionless features.

"About the queerest set-up I've struck yet," Burke said briefly. "Sounds like an interplanetary visitor of some sort—but why the hell does he have to cause all this trouble? Why destroy Square 14 and all those poor devils?"

"I guess we're paid to find that out," Sphinx replied logically.

"Yeah—and we will!"

Burke broke off as the car drew up with a screech outside headquarters. He stalked through the building to his private office and snapped on the night duty button. In five minutes twenty men had assembled—trained, picked men, always at the service of the Bureau in the night hours.

"Now get this, boys." Burke stood facing them, his face grim. "We're up against either a planetary murderer or else an insane man. If the former, he's the first visitor from another world, but that doesn't make him less dangerous; the opposite, in fact. We've got to find him!"

WAR we have eliminated, crime we've brought to a low level, and no saboteur is going to start upsetting order while we're around! Seven hundred people dead—seven hundred! and all for no apparent reason! So hop to it, men! Contact stratosphere headquarters, contact Operator 9 and get the frequencies of this Unknown from him. Check everybody you think would have even the slightest bit of information.

"There's a chance that our killer is some crook in fantastic make-up using an extra fast stratoship disguised as a space-machine. It's a possibility—so work

* The Frequency Detector is the "fingerprint" instrument of the future, taking the electrical aura of any living body and registering it in so many frequencies. No two bodies can have the same set of frequencies, any more than there can be two identical sets of fingerprints.—Author.

on it! Get him—dead or alive!”

Without a word the men filed out. Burke turned and flipped a quarter on the desk.

“Get me a packet of cigarettes, Sphinx. I’ve run out of ‘em. Can’t think without ‘em—”

Sphinx took up the coin, then paused and tossed it back.

“You can’t get away with that one,” he observed gravely. “Better give me real money.”

“Huh?” Burke looked up impatiently, studied the coin in surprise. It was not money at all; it looked rather like a badly scratched token of some sort.

“Somebody gyped me,” he observed, thrusting the quarter back in his pocket and tossing over a nickel and a dime.

Sphinx went out just as “Big Boss” Calman came in. Calman was the head of the entire Bureau, controller of every department, the brains behind the brains. But he knew the individual values of each of his chief inspectors, allowed them free rein unless circumstances demanded his presence.

“Everything set to go to work on this invader?” he asked Burke briefly, surveying him with his pale gray eyes.

“Yes, sir—everything,” Burke nodded. “The boys just left, and I’ve plans of my own to work out.”

“Okay—if you need me at all, don’t hesitate to call. I’m going home. See you tomorrow.”

“Good night, sir. If it’s possible to get that killer—well, we won’t be asleep at the switch, Mr. Calman.”

CHAPTER II

The Work of a Fiend

FOR quite a while Burke sat pondering. Mechanically he took the cigarettes Sphinx Grantham brought in for him. He was still musing by the time Sphinx had come up from the night canteen with sandwiches and coffee. Then the radio bell rang with strident force.

Startled, Burke turned and switched on the receiver.

“Hello there, Burke. Listen carefully. This is Calman. I’m speaking from a public radio box. Come down to Intersection 30 right away. I have found something pretty queer. I believe it’s the guy we’re looking for— What? That’s what I said. He’s lying dead among the girders supporting the 30th Pedestrian Gallery. Step on it!”

“Right away!” Burke closed the switch and reached for his hat. “Let’s go!” he added briefly, and Sphinx was right beside him as they raced down the corridor.

The fast police touring car whirled them through the floodlit and now almost deserted streets, drew to a squeaking halt under the mighty girders of the 30th Pedestrian Gallery. Calman was there, waiting by his car, the headlights of which were turned upward.

Calman said briefly, “Take a look!” and nodded his head.

Burke narrowed his eyes. A white figure, practically naked, was suspended motionless in the crotch formed by two immense X girders, caught round the waist. His legs and arms dangled grotesquely.

“Looks like our man,” Calman said grimly. “I’ve been up to take a look. Come and see for yourself.”

He led the way up the emergency stairway. Presently Burke stood looking down on that nameless thing so obviously dead. A gaping wound was on the forehead, from which blood still oozed in a dribbling stream. The entire figure, save for a loincloth of curious leathery substance, was naked. It was human enough in form, except for the ridged thickness of the skin. It was a skin utterly unlike that of a human being, rough and coarse as though afflicted with some mild form of elephantiasis.*

“Queer how he got here,” Burke mused.

Calman said, “As I figure it out, he must have been creeping along the Pedestrian Gallery above, slipped, and—Wham! Anyway, it’s the man. His ship ought to be somewhere around. I saw him hanging there in the lights from my car while I was heading home. Better have the boys look around for his ship, and we’ll cart him to the morgue and see what sort of a being he really is. Come on.”

Struggling and shoving, it took the three of them their united strength to lift that gross, heavy body. They managed it finally and staggered down the stairway with it, dumped it in the back of the roomy police car.

“I’ll come with you,” Calman said, withdrawing from his own car. “I’ve told the boys to take my car home. Let’s be moving.”

He slid in beside Burke and the engine roared.

Burke swung the steering wheel. Sphinx Grantham sat motionless in the back of the car, his deadpan face unmoved by the close proximity of the weird corpse. He gazed straight ahead at the swirl of lights as Burke stepped on the gas down the official trafficway—90 . . . 100 . . . 125. . .

There were no limits on this wide, light-drenched expanse; a vast bridge, one of many crossing the newly created river dividing Manhattan in half where once Madison Square had been. Now Long Island Sound and the Hudson were united to facilitate watercraft.

Below, the river shone like molten lead. The girders of the bridge zipped past in trellises of mist. Then suddenly the front of the car was no longer there!

A terrific explosion hurled the hood skyward; flame and impact split the engine asunder. In two mad seconds Burke was aware of the slender rail at the base of the girders as it hurtled to meet the shattered car.

THE machine plunged through. Flung clear, Burke went flying through space. Somehow he straightened his legs as he fell, went headfirst into the water

* Elephantiasis is a chronic disease of the skin. It is characterized by an enormous enlargement of the affected area and hardening of the skin.—Ed.

and plunged below.

Dazed but unhurt, he bobbed to the surface.

"Sphinx! Calman!" he bellowed, fighting desperately against the current.

"Here!" Sphinx yelled, about fifty yards away. "All right?"

"Find Calman!" Burke shouted.

He threshed around, calling his chief by name. Sphinx swam level after awhile, blood and water trickling together down his face.

"Guess he's gone," he panted. "Lend me a hand, Burke. I got cut on the head."

Burke caught his assistant as he sank weakly. Though even their united efforts were feeble, they managed at last to struggle to the mud of the bank, crawled up and sat there trying to get their breath back.

"He must have gone down with the car and the corpse," Sphinx panted at last, holding his damaged forehead. "I don't suppose the corpse would float out anyway; it was jammed pretty tight in the back. But Calman could have gotten free; it was an open car."

"Unless the initial explosion killed him," Burke said soberly. He gazed up at the break in the rail where the car had plunged through.

"That," he said slowly, "was no accident. Cars don't blow up in these days; they're fireproof. Either something was planted in the engine while we looked at that corpse on the gallery, or else—By God, Sphinx, I'll find out who's behind all this if it kills me!

"Calman's dead, and we'll have to get the dredges to work mighty quick if we want to save that corpse, too. Come on. We've got to get to a phone box. After that we'll attend to your head."

Burke turned to stumble up the bank, then about-faced sharply at the sound of threshing water behind him. Something was struggling in the river. It came closer, visible as a man's head in the light of the bridge.

"Calman!" Burke cried. He plunged out waist-deep into the river again, helped Sphinx to drag in their almost exhausted chief.

"Thanks, boys," Calman staggered up beside him. "Hell, I thought I was finished! I went under with the car and my belt got caught. Anyway, I made it—"

Without further comment the three of them floundered up the bank, headed for the nearest radio box and contacted headquarters.

"Well?" Burke asked grimly, as they stood waiting under the official lamp. "Any theories?"

"None that I'd like to express right now," Calman answered tersely. "Either this—this white outcast is dead, or he isn't. Depends on whether that explosion was timed for *after* his death, or whether the figure on the gallery girders was put there as a decoy."

"You mean there might be *two* outcasts?" Sphinx demanded blankly.

"There might be. Damned if I know the answer. Well, we'll see what happens next. If there are no more attacks on us, then we know it was a posthumous

effort to kill us, and it failed. If otherwise, we'll begin a manhunt that the town will never forget!"

Calman stopped speaking as two spots of light enlarged into headlamps along the bridge. That was the police car they'd ordered.

THE following day, as morning newspapers headlined the explosion at the bridge and the noon editions began referring to the "White Outcast"—as the unknown marauder had now become known—three grim men at Bureau headquarters went over every detail of the problem to date.

They found no definite clue, however, for there seemed to be no motive in the senseless destruction of Square 14. The effort to destroy the three leading lights of the Bureau was more understandable—but again it proved nothing.

Was the White Outcast still alive—or dead? There constituted the main problem, and until the killer perpetrated some further act of mischief, the matter was unsolvable. Certainly there was no trace of his space ship anywhere.

Burke gave the necessary instructions for the river to be dragged, and toward four in the afternoon the salvage was complete. The derelict car was removed to the official headquarters and the corpse jammed inside was dumped on the slab in the morgue. Dr. Rayfrew, the chief medical examiner, went to work at once.

"In the meantime," Burke said, "I'm going to take a look at that car. Maybe we can find out something."

"If you do, notify me immediately," Calman told him. "I'm going uptown to take a look into the Matthews' case. You know where to reach me if necessary."

Burke nodded. He and Sphinx adjourned to the yard behind the building to survey the soaked, muddy ruin of the car that had nearly been their coffin.

"If you expect to find anything in that, you're a better man than I am," Sphinx commented.

"You never can tell—" Burke muttered.

He went to work methodically, tore out the sodden upholstery, stared at the utterly shattered engine. Presently he pointed to the remains of the carburetor. It was of the usual advanced type common to that year's engineering.

"Notice?" he asked briefly.

Sphinx gazed at it earnestly, but he shook his head.

"So what? It's black around the broken edges. The gasoline mixture must have caught fire."

"Yes, but *how*? A modern carburetor can't catch fire! An outside agency had to do it. Somebody arranged a spark of some kind which fired the fuel. The enormously powerful gasoline we use went off like a bomb and—bloody!"

Burke went back to his labors. Finally he took out what remained of the metal front floorboard. Half of it, on the left where he had sat, was smashed into jagged remains. But the other half was clear

except for a neat hole, perhaps three inches in diameter; a hole apparently bored by heat, for the edges were obviously blackened.

"Either I'm crazy, or—" He broke off and at length handed the sheet of metal to Sphinx. "Put this in cold storage somewhere. I may think of something later to match that hole."

"Crazy," Sphinx observed solemnly, "was right."

By the time Burke had finished probing around, Sphinx had returned. With him came the lean-faced medical examiner, Dr. Rayfrew.

"Say, Burke, you'd better step into my autopsy room. Plenty that is queer about that stiff you brought in."

ONCE inside the place Rayfrew nodded to the dead thing on the slab, then handed over a collection of X-ray plates.

"You'll see for yourself that the organs of this creature are utterly different from ours. Liver, heart and stomach are there, to be true—but not in places we ever heard of. Then the bone structure is different, too. Shoulders pretty weak, legs strong. I can't place it at all. As to cause of death, it was probably cerebral hemorrhage caused by a terrific blow on the head. Perhaps the girder of the Pedestrian Gallery. It had to be a tough blow. This creature's skin is so dense, you couldn't hurt him by ordinary methods. Queer, also, are the main nerve branches.

"I believe he might be able to control the nerve endings of his skin, like a chameleon does. The skin has a highly sensitive under-surface. Probably got that way controlling the pigment. Uranus being so far from the sun, a natural power on the part of an inhabitant would be necessary to make his skin supply these deficiencies."

"Well, anyway—thanks," Burke said, still puzzling. "He's a mystery. Was he the only one, or were there others? Where's his ship got to? The boys who think the pyramids are a puzzle should try this one! Well, let's go, Sphinx. I've things to do. Get rid of the body in the lethal chamber, Doc—no sense in embalming it for future use. And hang on to those X-ray plates."

"Of course," Dr. Rayfrew nodded.

In his office again, Burke switched on the intercom-municator.

"Terry? Say, hop down to the river again with the boys. Cover all the area where you dug up the car. send down relays of divers, if you have to. Anyway, keep on dredging until you discover something that looks like a ray-gun.

"You what? No, I don't know what a ray-gun looks like. It's like a torch, I suppose. Use your imagination. It's only a hunch of mine, but keep on looking until you're cross-eyed, if you have to. Yes, I know it's soft ooze! Use hand and mechanical dredgers. Sift the whole bed of the river if you have to—Right!"

"This is absurd!" Sphinx protested. "Why a ray-

gun? We don't even use 'em yet."

"No, but I have an idea Uranians do. I figure it was a ray-gun or something very much like it which fired our carbureter. It wasn't an ordinary gun, because the hole in the floorboard is too wide to show the passage of a bullet. A savage blast of flame could have made that hole."

"You mean a ray-gun was fixed there, somehow?"

"Just what I mean. And since it wasn't found in the car, it must have got dislodged when the car fell in the river. Unless it was blown to bits in the explosion. But somehow," Burke finished slowly, "I don't think it was."

SPHINX GRANTHAM scratched his head. "You got me," he said. "I—"

He paused as Burke lifted the telephone. He dialed a number, the private waveband number of all wrist-watch telephones owned by agents of the Bureau.

"Hello there, 9? Burke speaking. Any dope yet?"

"Not yet, sir. We checked up on all likely crooks for frequencies, but there was nothing doing."

Burke frowned. "So we'll try another angle. The Outcast is a mystery if he still lives. We're not dealing with a known factor at all. Start contacting the rest of the men in the Bureau and make your plans for finding his ship. I believe it ought to be around somewhere. Report to me if you find anything."

"Right, sir!"

Burke switched off, then on again as the emergency light went up. It was Police Officer Higson. His voice sounded excited over the speaker.

"Better come right away, Mr. Burke. I'm over on Sector 5. Something queer here. An antique dealer has been attacked by the Outcast. Come right away, or it'll be too late. I think he's passing out—"

"Okay! Get a statement from him. Be right with you."

Burke slapped on the office phone. "Tell Mr. Calman to meet us right away at Sector 5. No time to explain. Urgent!"

He glanced at his assistant. "Come on, Sphinx!"

They hurried into the waiting car. It swung around and bolted along the official trafficways at top speed. Neither of them gave a thought to a possible repetition of the previous night's outrage. It was the job of the Bureau to ignore personal danger—and they did, successfully. Nothing untoward happened.

They drew up on the other side of the city ten minutes later, to find a cordon of police keeping back curious sightseers from one of the oldest stores in this part of town, a section given over almost entirely to antiques of 1940 and preceding years.

Inside the shop, Officer Higson was kneeling on the floor with his notebook beside an obviously dying man. The victim spoke weakly, looked up as Burke came in. He was oldish, possibly sixty, with crinkly brown beard around a lean face.

"He saw the Outcast, Inspector—" Higson started

to say, but Burke waved him aside.

"What happened?" Burke caught the man by the shoulders.

"I—I was over there, at the desk. Things were quiet. I—I was busy—with my hobby—"

"Hobby? What hobby?"

"He writes messages on grains of rice and things," Higson volunteered.

"Miniature calligraphy,* eh? You mean you were doing that when the Outcast came in?" Burke looked rather incredulous.

"Yes, sir. I—I hardly heard him come. Must have been watching me for—for he suddenly put out his huge hand and—and snatched up the grain I was working on. Then he fired something at me—a sort of dart—"

The man relapsed into momentary silence. "He stole my rice, my instruments, and—and ransacked the place," he finished dully.

As Burke puzzled, frowning, there came the approaching scream of an ambulance siren.

"You're sure it was the Outcast?" Burke snapped.

"I'm certain. Big, dirty white—only wearing a loincloth—"

THE man sagged weakly, licking his lips. Burke stood up, scratching his head and watching as the man was lifted into the waiting ambulance. Then he swung around to the doctor in charge.

"Get Dr. Rayfrew from headquarters to attend to this man personally—nobody else. Tell him I said so."

"Very well, Inspector."

Calman came in hurriedly then, gazed around at the disordered shop. "What's going on here, Burke? Came as quick as I could. The Outcast again?" he asked seriously.

"Yeah—and he's no more dead than I am!" Burke fumed. "But the *absurdity* of the thing!" he went on helplessly. "The crass lunacy of the creature! He came in here and stole some rice on which that poor devil had been writing; also frisked the apparatus. That fellow does microscopic engravings for rings and things—you know, calligraphy. His hobby seems to be printing hundreds of words on grains of rice."

Calman nodded slowly. "I know the kind of thing you mean. But how did the Outcast get in here without being seen? Busy street outside."

"There are alleys at the back," Sphinx spoke up. "I saw them as we came up. The Outcast could have skulked around there and come up from the river somewhere. Anyway, we know he's alive—even if we can't fathom his motives."

"This," Burke said grimly, "is going to take more thinking than I'd figured. Maybe we'll get a lead when we know what it was the Outcast fired into that

guy. I think it may have been a dart or something. Well, let's get back."

CHAPTER III

Episodé at the Bridge

THE antique dealer died on the way to the hospital. Just the same, Dr. Rayfrew followed out orders and made an autopsy. He returned to Bureau headquarters with a grim face, entered the private office where Burke, Calman and Sphinx Grantham were debating the problem.

"Well, Doc?" Burke looked up anxiously.

"Poison," Rayfrew said. "But no poison I ever heard of, and certainly not of *this* world! Introduced by a small splinter. Latent in effect, which was why the victim took a while to die. Guess that's all there is to it, gentlemen. I'll analyze the poison if you want."

Burke pursed his lips. "I don't think it signifies—All right, Doc, go ahead."

Burke looked grimly at Calman and Sphinx as the medico went out.

"Does it occur to you that we perhaps have a clue?" he asked slowly, after a moment or two. "This White Outcast is searching for something—that much we know. But doesn't his theft of microscopic writing on a grain of rice show that it is something *small* he's looking for? And don't forget he ransacked the store looking for God knows what. He used magnets when he blew up Square 14. That seems to suggest it's something metallic he wants."

"There's something else," Calman said. "The Outcast obviously got the dealer's name from the directory. He's listed as about the only expert in miniature calligraphy in the city. Only that seems to show that the Outcast knows English."

"Yeah," Burke mused and leaned back to think. After a bit: "He mashed down Square 14 and searched through it. Now just what was peculiar about Square 14? Same as the rest of the city, wasn't it?"

"There's one thing, but it's probably unimportant," Sphinx said. "It was the last Square to be built. Don't you recall the row there was over the brick delivery for the foundations? Clay pits went haywire or something and they had to import bricks from the Worth Clay Concession in the New Jersey section."

"Yes, I remember that," Burke pondered for a moment, then he said, "Sphinx, I've got an idea. It may be wrong, but anything's worth a try. I want you to get in touch with the contractors who built Square 14 and find out everything about it; where every scrap of material came from. Maybe we can get some idea then of what the Outcast is driving at. If should at least extend our field of activity, anyway. We're stymied as it is."

"Right!" Sphinx nodded, and went out without another word.

"Something else occurs to me, too," Burke con-

* Calligraphy is the art of excellent penmanship. Miniature calligraphy is very minute writing on almost any kind of surface. Only the very best of craftsmen are able to practice this rare art.—Ed.

tinued, as Calman sat with puckered brows. "This Outcast possibly knows that Operator 9 recorded his frequencies on the detector. Next thing we know, the Outcast will try to steal that detector, or destroy it somehow. He might, to save himself from ever being found out."

Calman glanced up. "I didn't know you had the Outcast's frequencies. It ought to be a cinch now to—"

"It isn't, sir. The Outcast watches that. Even if he disguises himself, he takes good care to keep out of sight and out of reach of that detector. It would be safer locked away in our vault, where he can't ever get at it."

"Well, you might do that," Calman agreed.

Burke reached for his hat, then glanced up as the door opened and Terry Walton of the Salvage Department came in. Without a word he laid a mud-stained, water-choked tube with glittering metal ends on the desk.

"Exhibit 'A,'" he observed laconically. "This what you were wanting, Burke? We dug it out of the river bed as you ordered."

CALMAN caught it up and stared at it. "What the hell is this?"

"Ray-gun," Burke said briefly. "I'll look at it later. Keep it safe till I get back, Terry. Thanks a lot."

"You certainly work in a strange way, Burke," Calman commented, as they went down to the inspector's car. "Incidentally, where are we going now?"

"To pick up that detector from Operator 9. At the moment, he'll be at his usual station."

Burke started up the engine. In a moment or two they were cruising at a leisurely 100 m.p.h. along the official trafficways.

"Just how did you know about there being a ray-gun in the river?" Calman mused. "That's pretty smart detective work, I'd say."

"Pure assumption, sir. I usually play my hunches. I couldn't visualize anything else blowing up our car engine. There was a hole in the right-hand side of the floorboard, too. Being metal, only a ray-gun—or something like it—could have burned through it."

"In that case, it must have been fastened somewhere near where I was sitting. H-m-m—funny I never noticed it."

Burke shrugged. "Plenty of room to conceal it, and it was dark, too. Obviously it was put there while we dragged the corpse down from the gallery girders."

He said no more, and Calman sat rubbing his chin mystifiedly. The car went on, stopped at last in the middle of the great bridge where there reposed a base box—apparatus not unlike a railway signal box of old. There were seventy of these in the city, all told, from which the various operators of the Bureau controlled their particular quarter of the metropolis. They

were in truth the police precinct stations of this advanced year.*

"Shan't be a minute, Mr. Calman," Burke said, leaping out. He raced up the steps into the small building and found Operator 9 inside, busy as usual at the control switchboard.

"Evening, Inspector." He got to his feet.

"Better hand over that frequency detector, 9," Burke said. "There is a chance that Outcast knows about it and will try and get it. He may blow you sky high, even. I don't want to lose that record, whatever else may happen. I'll take it back to headquarters."

Operator 9 turned to the heavy safe and brought the delicate instrument to view in its mahogany case.

"Frequency reading is registered on the tabulator, sir. Safety catch is down at the moment. Release that and she'll jump right away when you come within six feet of the man you want."

"Yeah, yeah. I know all about it, son."

Burke picked up the case and headed for the door. Just as he passed through the opening, he fancied he heard a scream. He frowned, raced down the steps. At the bottom of them he stopped dead, as he came in full view of the bridge road.

The car was still there, Burke noticed quickly, but so was something else. A mighty figure of dead white, wearing only a lioncloth, was standing intently at the bridge, watching something in the river below.

Burke's eyes narrowed as he took in the details of that bulky, doughy body. Without a sound he edged toward the car, keeping his eyes on the hideous creature. Instinctively he lowered the detector into it—when all of a sudden the Outcast swung around. Burke gave a little gasp. The creature was almost nauseating in appearance, like something fashioned out of white, clammy clay. The pale eyes stared with hypnotic fury.

"Get away from here, Mr. Calman!" Burke yelled. "Let me handle this fiend. We can't afford to lose you, too!"

Then, praying that Calman would follow his plea and duck out of the car, Burke centered all his attention on the loathsome white body. The pale cold eyes held him for a moment as though in a trance.

"Operator 9! Quick!" Burke yelled, breaking the spell. Then he swung about with a gun leveled in his hand. But he had not the time to fire it. With an incredible leap, probably because he was accustomed to a far heavier gravity on his home planet, the Outcast leaped clean over the top of the low-built car and landed in front of Burke.

SIMULTANEOUSLY a fist struck the police inspector violently in the face. Burke went hurtling

* Even at the present time, New York Police Headquarters on Centre Street has a well worked out crime control system. In the radio department, there is a large street and surface map of the city which shows the disposition of squad, or "prowl" cars. The position of these couples is marked by little metal flags. The squad car policeman phones in regularly to report his location. Hence he can be directed on his one-way radio receiving set to speed to any given spot when trouble develops.—Ed.

backward against the ironwork of the bridge. His gun went sailing into space.

Operator 9 appeared suddenly, brandishing two formidable-looking guns. Burke doubled up his fist and drove it with all his power into the leering face in front of him. The doughy features jolted under the onslaught; then Burke saw the big hands tugging at a little pouch on top of the loincloth. A splinter, coated with venomous red, came into view.

Sight of it spurred Burke to desperate activity. He squirmed free from the bridge rail, rained blows on that mass of white, dense flesh, even gained the ascendancy for a moment.

Operator 9's gun fired noisily—once, twice, three times. One bullet hit the ironwork; the other two presumably drilled into the Outcast, but seemed to make no impression beyond inciting the fiend to greater fury. He charged on Burke like a whirlwind.

Burke spun around, slammed up his fist, rocked the Outcast like a pendulum. But more than that, Burke did not attempt. That splinter was no thing to trifle with! He jumped to the bridge parapet, shouting back to Operator 9.

"Drive like hell—to headquarters! Take the detector!"

Then Burke leaped, just missing the Outcast's clawing hands. He made a neat clean dive and plunged into the river far below, rose up shaking the water out of his eyes. As he emerged he heard Operator 9 starting the car engine from above, could see the Outcast looking down at him from the bridge.

Slowly Burke swam to the bank, climbed up it. When he looked back at the bridge again, the Outcast had gone. The chief inspector smiled bitterly to himself and made his way to the nearest official intersection on the lower walks.

BURKE landed back at headquarters looking bedraggled and feeling ill. He found Operator 9 already there, waiting, the undamaged detector in his possession.

"It meant letting the Outcast escape to follow out your order," the youngster said briefly. "I just made it!"

"Good man." Burke scooped back his hair. "You can get back to your post now, and notify every man to keep his eyes peeled. We know the Outcast is in the city, anyway. I'll take charge of this detector."

He swept the instrument up and went out to the Bureau vault down the corridor. When he came back into the office, he gave a start of surprise. A drenched figure was standing there, clothes tattered and torn, eyes gleaming with anger. It was Calman, physically unhurt, but in a pitiable state of attire.

"In a little while," he said slowly, "I shall get thoroughly burned up if I drop in that damned river again. So he got you, too! I leaped for it before he had a chance to ram a dart in me. I just let out one mighty yell to try and warn you, then chose the least resistance. Got out at the south end."

"Then I guess you didn't hear me yell," Burke acknowledged grimly. "When that devil loomed up before me, I didn't even glance inside the car to see if you were there. Well, anyway, sir, you escaped, and that's the main thing. By the way, Mr. Calman—that killer must have known somehow of what we intended doing."

"I've realized that," Calman nodded, "and it's something I can't understand."

"I've got one or two ideas doped out," Burke admitted, "but they can wait for awhile. I'm going home for a change of clothes before I get busy again. Six o'clock now. Be back at seven. Maybe Sphinx Grantham will have got some information by then, too."

He turned impatiently and swung out of the office.

CHAPTER IV

The Decoy Theft

IT was exactly 7:00 p. m. when Chief Inspector Burke returned. He found Calman absent, but the chief had left word that he had departed on an urgent mission with Dr. Rayfrew. Burke wondered vaguely what it could be.

Taking advantage of the brief lull, he picked up the ray-gun from Terry Walton's department and spent half an hour making experiments on his own. He came thoughtfully back to the office to find Sphinx Grantham lounging around, munching a sandwich.

"Well, find out anything?" Burke asked shortly, tossing the ray-gun on the desk.

"Yes—but nothing of much use, I'm afraid. Say, I hear you and Calman were attacked by the Outcast this afternoon and—"

"Forget it! What did *you* discover?" Burke snapped impatiently.

"Well, I found out that, as I had figured, most of the bricks in the foundations of Square 14 were made of clay from the Worth Concession in the New Jersey area. It seems, though, that several men went to the Worth works and asked where the clay from a certain section of the concession had ended up."

"And they were told it went into Square 14?" Burke asked quickly.

"Yes, that's right."

Burke snapped his fingers. "Now get this! Something was in the clay of the Worth pits which the Outcast wanted. He found it had been used—at least, that part which he wanted—in the bricks of Square 14 foundations. So he wrecked Square 14 to try and find whatever it is he seeks. Remember the magnets he used?"

"It's an idea, sure. But who were the other people who made the inquiries at the Worth works?" Sphinx asked shrewdly.

"I believe," said Burke, "that 'the other people' was probably the dead Outcast we found on the gallery. He could be made up to look like an Earthman, and

he could adopt various different disguises."

"He could at that!" Sphinx whistled. "Then this other fellow who keeps attacking you and Calman and murdering obscure people—"

"He, I imagine, was the partner of the chap on the gallery, and for some reason did him in. I'm sure I'm right on that point. And so far, the Outcast hasn't found what he wants." Burke broke off and smiled grimly. "And we don't know what it is, either."

"Something small, hidden in clay," Sphinx mused perplexedly. "Probably something with minute writing on it, if the attack on the calligrapher is any guide."

Sphinx gave it up with a shrug and glanced at the ray-gun.

"Find out anything about this?" he asked.

"It was the thing which set our engine on fire, sure as fate. The area of the beam—I've fixed it up again so it works—exactly matches up with the size of the hole in the floorboard. It went through the metal in a second, smashed the carburetor, with which it was in a direct line, and exploded the fuel mixture. It was so arranged that—"

Burke glanced up impatiently as the chief keeper of the safety vault came in.

"Mr. Burke—the detector's gone!" he exclaimed hoarsely.

"What!" Burke yelled. "You damned, confounded idiot! Didn't I tell you to—"

"Yes, yes—to guard it! I know—and I did! You put it in the safe, and I've sat there every minute myself, looking in the safe at intervals to make sure—"

"All the time?" Burke demanded.

THE guard gulped a bit. "Except for an interval of about ten minutes when I was called to the checking room. Somebody was on the telephone and wanted the criminal record of Henry Walford. I was the only one that could give it. When I came back to guard the detector again, it had gone. That was just now. It's half an hour since I answered that telephone call."

Burke thumped his fist slowly on the desk.

"Did this person at the other end of the wire thank you for the record when you'd finished?"

"I don't remember it, Mr. Burke. I just reeled it off—and you know what those records are. Takes ten minutes or so to do it—"

The man stopped, astounded. "Good heavens, you don't mean I was drawn off to recite all that stuff and there was nobody listening on the other end!"

"Who," Burke asked slowly, "asked for the record?"

"Chief Inspector of Sector 20. Come to think of it, it struck me as rather queer at the time that he should want such a record. But—"

Burke whipped up the telephone, got the inspector on the wire. Sphinx and the vault keeper stood listening to Burke's clipped remarks. And the guard's face grew drawn with anxiety.

"—so you didn't, eh? Don't even know Henry Wal-

ford? Okay, that's all I wanted to know."

Burke lowered the phone. "Keeper," he said grimly, "the inspector did *not* ring you! He never even heard of Henry Walford. It was a great idea to take up your time and keep you out of your department—but nobody listened to your recital. And since there *is* a Henry Walford record in the files, you thought it was all on the up-and-up."

"But it was somebody else who asked the question! And only the oldest employes in this organization, like you and Sphinx and Calman, and I myself—together with some twenty-five other employes in other departments—know about the Henry Walford case. Somewhere among these thirty old employes is the one who rang you up!"

"But nobody but the Outcast would want to steal that frequency detector!" Sphinx cried. "You're not suggesting the Outcast is among our own staff, surely!"

"No, I'm not suggesting—I'm *telling*! How else could the Outcast know our plans so well! Who else but one of the staff could think up a trick like the Henry Walford record! Of course!"—Burke gave a faint smile of triumph—"I fully expected the detector *would* be taken. It confirms a theory I'm working on."

He eyed the vault keeper steadily for a moment. "You can get back to your job," Burke said quietly.

"Yes, Inspector. I can't begin to say how—"

"All right, all right. Forget it. Now, Sphinx—"

Burke broke off rather impatiently as Calman came into the room.

"Burke, you'd better come along to the morgue. We've just brought in a fellow attacked by the Outcast this evening. The police called Dr. Rayfrew and I went along with him, since you were away."

Burke followed immediately with Sphinx at his heels. The man in Rayfrew's autopsy room was pretty elderly, plenty knocked about, but still alive.

"He's all right," Rayfrew said briefly, "except for bruises. About the first victim to survive the Outcast, I guess—except you and Sphinx and Calman."

"I went for the Outcast with an electric knife," the latest victim panted. "That scared him a good deal. And hurt him too, I think! It saved me from getting a dart of some sort. What? My name's Bradshaw. I'm a scientist, an inventor."

"ARE you listed in the directory of occupations as a scientific inventor?" Burke asked keenly.

"Certainly I am. That was how the Outcast found me, I presume. I live in an isolated, old-fashioned place near the ruined Square 14. I was in my laboratory when the Outcast broke in through the window. He spoke to me—in English!"

Burke's eyes gleamed. "Then what?"

"He said he had heard—probably through the radio and newspapers—that I had invented a machine capable of producing long-range heat rays. That is quite true; but I invented the machine for peaceful purposes, mainly with a view to opening up the Arctic for exploitation of its mineral resources.

"I know plenty of war-mongers on this world would like that ray of mine for destructive purposes. Well, sir, to my utter amazement, the Outcast said I had stolen the secret of my invention from his medallion, that it was one of his own twelve scientific secrets. He demanded I hand the medallion over."

"Medallion!" Burke cried. "So *that's* what he's looking for!"

"Naturally," Bradshaw went on, "I denied all knowledge of a medallion. Furious, he flew at me, and I hit him. Then he pulled out a dart. I realized ordinary weapons were of no use, but an electric gun I had handy kept him away."

"Had I not been in my laboratory, I'd be dead now— Well, gentlemen, he fled. I summoned the nearest policeman to come and attend to me; I was pretty well knocked about, I can tell you. Then Dr. Rayfrew came finally, and Mr. Calman."

"Your home, then, is about ten minutes away from here by fast car?" Burke asked thoughtfully.

"About—yes."

Burke got slowly to his feet from the bedside chair.

"Mr. Bradshaw, it is evident that by a coincidence you happened to have made a machine identical with one supposed to be the secret of the Outcast—in formula form, at least. The secret of this machine, together with eleven other secrets, is impressed on a medallion. Hence, the theft from the calligrapher, in the hope that it might be there."

"Say, that's right!" Calman cried. "What else?"

"Sphinx found out enough to show me that this Outcast, either by accident or design, planted a medallion in the clay on the site that is now the Worth Concession. It's a comparatively recent site, remember. The clay the Outcast wanted had gone when he returned; it had gone into the bricks of Square 14. Result—the attack. Thereafter, a desperate search for the medallion and its twelve scientific secrets."

"Then where is the medallion?" Calman demanded.

"Isn't that the next point? I think—"

"I believe I know where the medallion is," Burke answered slowly. "And I believe I can make the Outcast come and get it—this very evening!"

"You can!" Sphinx cried. "But—but how?"

"You'll see." Burke glanced around. "Mr. Calman, I'm requesting you to order all members of the Bureau who have been in our employ over ten years, to be present in the assembly hall by 9:30. There will be around thirty, including ourselves."

"You're the chief, so the order had better come from you. I'll produce the medallion, all right, and I'll so arrange it that the Outcast will be bound to come for it."

CHAPTER V

Metamorphosis

since Calman gave the order, there was nothing for it but to turn up. Thirty or so employees—all of them who knew of the Henry Walford case—presented themselves in the big assembly hall by 9:30.

Calman was there, on the platform. Around him were one or two officials, Sphinx Grantham and Dr. Rayfrew. Burke arrived last by the rear door, looking very resolute and keeping his right hand in his pocket. He raised the other for silence.

"In this room," he said slowly, "are thirty-four people. I checked them as they came in. Every one is human—except one! I have publicized the fact in the last hour that the medallion is here tonight for the Outcast to come and get."

"So the Outcast is with us, and I warn him that I have the whole building surrounded by guards. But now I must make a confession. I have no medallion. In fact—I don't even know what it looks like!"

There was a tense silence. Calman broke the spell finally.

"I'm afraid I don't get this at all, Inspector."

Burke's voice was harsh with purpose. "The idea, Mr. Calman, is to make sure the Outcast is here. And he is. He knows we are right on his tail, and only by guaranteeing him the medallion would he be sure to come. Otherwise, he would probably have made a run for it before being caught and exposed."

Burke paused and walked slowly across the stage. Then suddenly he whipped his right hand from his pocket. There in his palm was fisted the ray-gun with which he had been experimenting. He leveled the weapon steadily.

"All right, Calman! Stand up!" Burke snapped.

"Me?" Calman cried. "My good man, have you lost your mind?"

"Show's over, Calman. You're all through. *You are the Outcast!* And this ray-gun of yours is the only thing your blasted flesh will wilt under! This—and an electric gun!"

Calman got up slowly, his eyes hot. "Now look here, Burke, I can stand just so much nonsense! This is absurd!" he exclaimed. "You're overwrought, Burke! Why, you must be seeing things!"

"Yeah?" Burke made a signal. From behind the stage curtains a technician emerged, carrying a frequency detector.* Burke motioned him to hold it up. The audience plainly saw the red register needle tally exactly with the blue frequency reading, previously recorded, as the instrument came near Calman. Indisputably Calman was the White Outcast!

"Frequency detectors never lie, Calman," Burke snapped. "You are the Outcast—and I've known it for some time! But I wanted to be absolutely certain. I found out quick enough when you stole a detector from the vault. Knowing the safe combination we use, it was simple enough, wasn't it? But you

* In our year 1940, the lie detector is coming very much into its own. Possibly further refinements will have to be made before the machine is widely adopted for use in our courts of law. It would seem that with the advance of science, even the fine old art of lying must give way.—Ed.

THOSE of the staff whom ten year's service designated were not at all keen on Burke's scheme, but

did not know I had put *another* detector in the vault with a phony number-frequency on it!

"The real detector was carefully put aside for an occasion like this. I had to maneuver things so I could get a reading without your being aware of it—and believe me, it took some doing. You made the Henry Walford phone call. You killed the *real* Calman on the night we found that awful-looking body in the Pedestrian Gallery girders. You killed Calman as he went home!"

"Calman" breathed hard. Suddenly there was a hoarse shout from the audience. Even Burke got a sick feeling in the pit of his stomach. For with a slow metamorphosis, Calman began to change into something revoltingly different. His features slackened and smeared, became doughy white. His flesh thickened oddly.

IN four minutes "Calman" had gone and the White Outcast—dressed in the lounge suit he'd stolen from the real Calman—stood in his place. Even the weird creature's eyes had gone several degrees paler by inner control of iris pigment.

"All right, you win," the Outcast said, without anger. "I thought I was a good scientist—but you're one better than me. Why shouldn't I admit it?" He sat down heavily, shaking his head. "I don't begin to understand how you knew."

Burke's voice was hoarse from the strain he'd undergone. "I didn't suspect you until Dr. Rayfrew said the Outcast might be able to control his nervous system after the fashion of a chameleon.* He might, in other word, be able to metamorphose, to change himself, at will. Then Dr. Rayfrew told me of the possibility of extreme toughness.

"I figured out that an explosion—like the one in the car engine—would be unlikely to hurt you, Outcast, but very probably would kill Sphinx Grantham and me. It was worth your risk, anyway. The floor-board hole was just as I expected it would be, had you had a ray-gun or something similar in your hand. It would be hidden from my view by the darkness in the car.

"Well, I had the river dragged and a ray-gun was turned up. If, as I suspected, you were the Outcast, you could not conceal the weapon in your pocket; because when you came out of the river, your clothes were clinging to you and the bulge would have shown.

"Since you were with us all the time we got the other Outcast from the gallery girders, you had not had time to fix anything in the car beforehand."

"How do you know that body was a so-called Outcast, as you say?" the Uranian said softly. "How can you be sure it wasn't Calman himself?"

Burke snorted. "Don't be a fool too, Outcast! How

* A chameleon is, literally, a lizard with the power of changing its color as a protective measure to blend itself, when faced with danger, with its immediate surroundings. The Outcast, then, was a creature of human semblance with the same powers of skin control. Often the term is used figuratively; that is, a person with changeable habits or character is called, usually in annoyance, a "chameleon."—Ed.

could Calman have been metamorphosed into such a revolting mass of flesh—even by you? There are still some things that can't be done!"

"Indeed?" purred the Outcast. "Well, I really must not spoil your fun. Continue, Inspector."

Burke bowed mockingly. "Thanks so much for your permission."

His voice grew harsh again. "Yes, I suspected you, all right. I knew that if you thought the frequency detector was in your grasp—which it was, in the vault—you would spare no pains to try and steal it, destroy it to make yourself safe. You did—but you took the wrong one!

"To make doubly sure of being rid of the two most likely to find you out—Sphinx and me—you continued your efforts against me when I went to get the detector. You got rid of your clothes somehow and metamorphosed yourself into your normal Outcast appearance. You looked realistically over the bridge at a mythical Calman who might have fallen into the water. You did the same thing when you attacked the antique dealer, I presume.

"By tonight I knew what you were looking for. Because of the medallion pretext, I made sure you'd be here. What I do not understand is, why you didn't kill off Sphinx Grantham and me with darts in the first place. It was your logical way out."

The Outcast smiled bitterly. "Too obvious. It would have thrown suspicion on me. What I really wanted to do was to become undisputed head without you two being in the way. Some time ago," he went on, "I was fleeing through space from an enemy, returning to my world of Uranus, as you call it. It became essential that I get rid of the medallion of secrets as quickly as possible.

"I came to Earth, marked the spot where I had buried the medallion, and went on home again without anybody on this planet being aware I'd called. When matters calmed down, I was ordered to recover the medallion, never to return to my world until I had done so. It contains secrets of war engines which I stole from this enemy, who was pursuing me. I was allowed one companion.

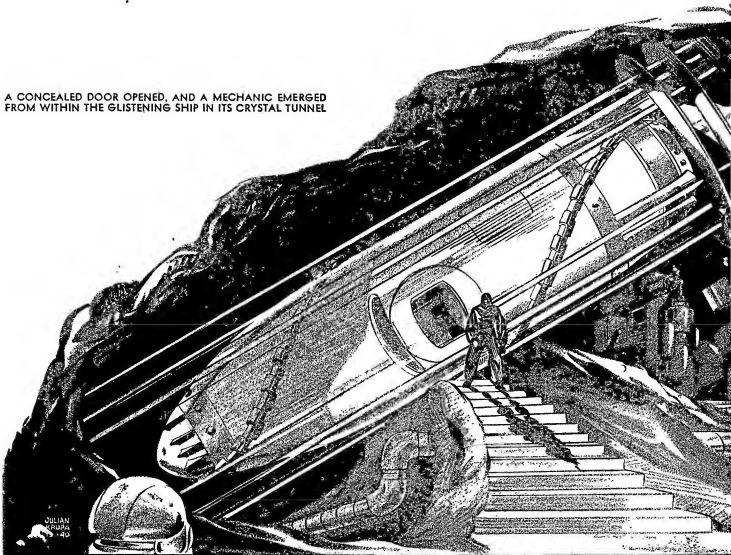
"We arrived here and found changes in the clay site where we had buried the medallion. My companion and I spent some weeks learning your language by listening to radio speeches. Then my assistant, metamorphosed to look like an Earthman, started to make inquiries. We finally discovered the medallion was probably among the bricks of Square 14."

THE Outcast sighed as though in mild regret. "My companion was against ruthless destruction, so I killed him. Then I destroyed Square 14 but failed to find what I wanted. Even though, were the medallion lying in the ruins, my magnets would have dragged it to view."

The Outcast took two small horseshoe bars from his pocket and then replaced them.

(Concluded on Page 84)

A CONCEALED DOOR OPENED, AND A MECHANIC EMERGED FROM WITHIN THE GLISTENING SHIP IN ITS CRYSTAL TUNNEL



LET WAR GODS

TO Sondra the stillness that reigned through the underground rooms was frightening. Past midnight, still she sat at her information desk, waiting, wondering how long the President would keep her at her post. Her face framed in waves of dark red hair was pale, completely revealing her feelings. Something dangerous was in the air.

The President had sent most of his staff home long ago. The few who remained to wait upon him were silent in anxiety. Not from a fear of air raids, for though Midland was a neutral nation, its government offices were bomb proof. Yet there was some intangible feeling of danger.

President Marbl expected a midnight visitor from one of the two warring nations.

Who? None of the staff knew. Someone of great importance, for Sondra and the others had been pledged to utmost secrecy.

Suddenly the silent waiting ended. Starchy Mid-

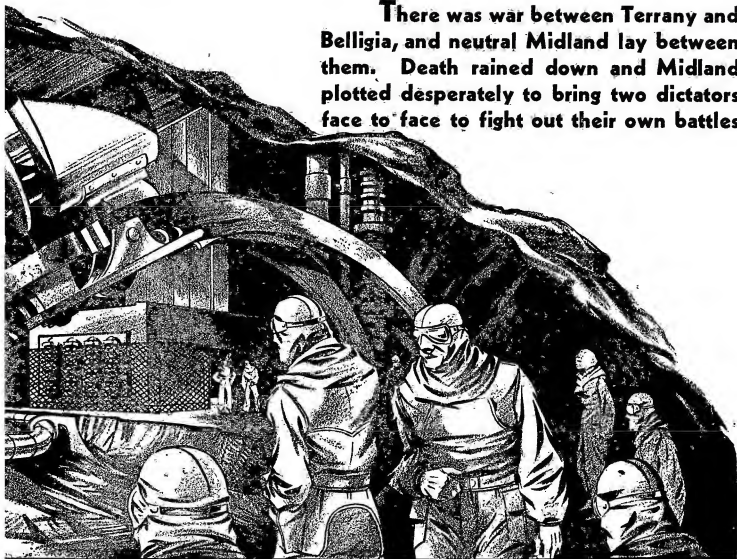
land guards thudded through the concrete halls, passed Sondra's desk like a marching machine, escorted a husky figure in a dazzling green and silver uniform toward President Marbl's sanctum.

Brubbazein—dictator of Belligia! The powerful, hated, war maker—one of Europe's gods of evil. Sondra chilled to the toes.

Was Midland about to sell out to one of the warring nations whose shells whistled overhead? Sondra trembled at the thought. She knew peace-loving Midlanders could never willfully take sides in the bloody death struggle between dictators. But she also knew that President Marbl was desperate; Midland was caught in a vise that threatened to crush her.

No one breathed of the secret visit. The world did not know that Dictator Brubbazein had so much as stepped outside his boundaries. Only Sondra and a few others knew, and they were left completely in the dark over the matter, except for a rumor that spread

There was war between Terrany and Belligia, and neutral Midland lay between them. Death rained down and Midland plotted desperately to bring two dictators face to face to fight out their own battles



CLASH!

By
DON WILCOX

among them like a fierce wind—not to be denied.

Brubbazein would soon return!

And the big shells whined on . . .

A curious war. Since the long and wide valley which was Midland separated the two warring powers, air battles and artillery had been the primary tactics, no infantry would attempt to march over Midland; the mine defenses were impassable. For the present each dictator resorted to such blockades as he could manage, and continued abrasive activities with long range guns.*

In this game the innocent nation of Midland was the loser.

On her northern borders the Belligian artillery pressed hard, hurled shells over her to kill the foe to

her south (if they did not fall short and kill Midlanders instead.)

Terrany, in turn, directed her shells and planes northward to crush the warriors and civilians of Belligia (if they did not expend themselves upon a Midland factory or cathedral en route.)

But now, after three months, pressure against both Midland borders grew stronger, and the peace loving people were terrified, desperate. Their hopes went out like matches. On either side of them the number one passion was to fight until the last drop of blood was spent.

For the green and silver Belligians cried to the world that they must have every inch of territory which their barbaric ancestors overran a few centuries before. And no less determined were the propagandists of Terrany, who burned to save the world by repopulating it with superior blood. They must kill off their brothers to the north for civiliza-

*A theory of war other than that of complete annihilation is the theory of abrasion, by which the opponents strive to exhaust or discourage each other through slow but ceaseless wear and tear.—Author.

tion's sake.

As both dictators massed infantry, all the prophets of the world predicted that Midland's hours were numbered. No one could foresee that this small, helpless nation would throw a surprise monkey wrench into the cogs of destruction. Europa moved to the brink of one of the oddest quirks in history. Later, when the dictators' war machines would be only empty ghosts, geologists would have to dig to the very roots of underground mountains to explain the curious turn of events. A secret within the earth.

Only President Marbl and a few mining engineers knew the geological secret that lay buried beneath their nation, far below the great mine shafts for which Midland was famous.

THE second week after Dictator Brubbazein's secret visit, the guards made another midnight march through Midland's bomb sheltered halls of government.

Sondra sat at the information desk as before. The return of Brubbazein, she supposed. Tonight no doubt Midland would fall into his hands!

She felt sick and helpless, just as she had felt when the news reached her that her brother, attending school in Terrany, had been pressed into the service when he tried to return to Midland, and had lost his life during the third week of the war.

The guards thundered past and she caught sight of the uniformed dignitary they escorted. It was not Brubbazein.

It was a wiry, black haired, narrow mustached military figure—Jaazel! Jaazel, the dictator of Terrany, the prodigy of a totalitarian state who had risen to power through his efficient purges and executions.

Sondra gripped the edge of her desk as the brilliant figure swept by like an electric wave of hatred. For an instant Jaazel's eyes flashed into her own. Distended red-brown eyes that seemed to penetrate the secret channels of her mind, to detect the hot resentment that lurked there. Her brother . . . her friends . . .

Indirectly Jaazel had murdered her brother. He had actually murdered, with his own hands, the father of one of her friends. And now, she thought, perhaps he, (rather than Brubbazein) was to become Midland's ally and savior. She quailed, knowing she could never have an ounce of respect for such a beast. She might pretend, but nothing more.

What had happened, she wondered, to her several friends back in Terrany? In her year of schooling across the line she had seen the terrible fascist blight descend upon them as Jaazel's grip tightened.

Arden? What had happened to him? Had there been any truth to the story that he had fled from his native Terrany after his father was taken by one of the deadly purges? Would she ever see him again?

Her thoughts slipped off into chaotic reverie. She could have been fond of Arden. But after that tragedy struck him she hardly knew him, he became so strange and far-off. Then her term of school ended,

she came back to her own country—

A buzzer sounded.

"Sondra." President Marbl's voice.

"Yes, your honor."

"Turn your desk over to number seven for the next twenty-four hours. I wish you to accompany me on an excursion. My personal secretary is ill and I must have someone to keep notes—"

"Yes, your hon—"

"Someone trustworthy—with strong nerves. Our guest desires to make a tour of inspection—underground . . ."

An hour later, still dressed in her plain white and tan office dress, the lithe young girl huddled into a steel elevator car with a small group of uniformed men, dropped down—down through the endless black shaft of one of the famous Silgrilik Mines.

Within the next few hours she learned from their brief talk the guest would examine the deepest excavation ever made by man, pass his judgments upon the destructive resources of steam and molten lava that lay compressed beneath the final floor.

CHAPTER II

An Underground Meeting

THE elevator car stopped at a dimly lighted station hewn in the wall. The smell of green stone pervaded the cool moist air. From this point downward the atmosphere would grow warmer and far heavier. Each member of the party was given a refrigerated suit and an oxygen helmet.

Sondra felt weighted down in her clumsy attire. As the men emerged from their dressing rooms she was bewildered to know who was who, for the helmets and suits provided complete disguise.

President Marbl's voice reassured her, sounding with metallic overtones through the electric speaker in his oxygen helmet. He was encased in a soiled yellowish suit, number 11. She noticed that her own number was 22. She looked from one to another of the disguised creatures, finally determined that number 39, a quick nervous figure, was Jaazel. He was completely hidden. Not even his penetrating red-brown eyes could be seen.

Several thousand feet farther down they emerged bulkily from the elevator, passed through airtight doors, entered a spacious, well-furnished, well-lighted lobby that might have been a railway station. Lower Terminal, they called it.

A porter promptly announced that the place was atmosphere-conditioned and that they might remove their oxygen helmets and suits if they wished.

Here some of the employees were only civilian clothes. Numerous visitors strolled about free of surplus impedimenta, others remained encased, perhaps to be ready to board an elevator or one of the outward bound cars through the numerous later passages, or perhaps to keep their identities secret. Most of these

were business men bent on leasing these subterranean channels to rent them as living space for families fleeing the war zones.

Number 11 led the way; 22 and 39 followed to a private room. Marbl and Jaazel talked. Sondra drew her arms out of her heavy sleeves, held her notebook within the barrel-like trunk of her costume, scribbled shorthand furiously.

There was scarcely time to realize all the implications of the conversation, but the President's plan dawned on the girl gradually. This guest, she realized with a queer thrill was the Dictator of Terrany.

"You say that I will see the shaft that is ready to carry destruction to the capital of Belligia?" he said in a harsh, demanding voice.

"Exactly. You realize, I am sure—" the President's manner was tense, "—that if the dictator of Belligia were suddenly killed, your enemy would dissolve!"

"Certainly I realize—" Through his own heated words the dictator glimpsed another cold truth. If he, the dictator of Terrany were killed, his own war monster would go to pieces. "But how am I to know that this shaft—"

Marbl produced a three dimensional drawing which the other took in his encased hands. Sondra could not see the suspicions that cluttered the dictator's face, but she knew they were there.

"If you wish to see this shaft," Marbl continued, "and a demonstration of the lava pressures which our engineer could release into it, you must descend to another station twenty-five miles deeper."

The helmet of number 39 was motionless. A silent glare.

"Or if you prefer," said Marbl, reading the dictator's doubts, "you may send your best geologist, upon whose judgment—"

"My own judgment is quite reliable," Jaazel snapped. "How do I get there without anyone knowing who I am or what my purpose is?"

"The one engineer who drives the subterranean drill will take you."

"And after I get there," the dictator bit his words savagely, "how will I know the path leads up to the Belligian capital and not somewhere else—my own capital, for instance?"

Marbl paced around the table. His plan was not puncture proof to pointed suspicions like Jaazel's. He tightened his lips and measured his words.

"I'm trusting you with my confidence," he said, "because it's Midland's way out as well as yours. My twelve million subjects never doubt my judgment. When I reveal to them that I have given you a chance at this artificial volcano for their good, they will know my action is honest, for I never deceive them." President Marbl put his heart into his words. Straight shooting with his people was one of his virtues, however, that meant little to a dictator like Jaazel, whose long suit was deceit. Well, this time he might get some of his own medicine. "Once we blast the Belligian capital to dust, the war is yours. Your share is to

reap Midland for all losses in property and lives. How could you fulfill your share of the bargain if I double-crossed you? I earnestly ask your faith, for your own good—and mine."

SONDRA'S writing hand trembled as she recorded her master's fervent speech. The brand of history was striking hot through her own fingers. And yet the momentous plea left Jaazel icy.

"Perhaps you've told the dictator of Belligia the same," he answered sarcastically. "I repeat, how am I to know the volcano leads to the Belligian capital?"

The little yellow-clad figure of number 11 advanced toward his questioner with a brisk step that was almost threatening.

"If you desire, the engineer will take you all the way up through the angling shaft. The lower end is twenty-five miles straight below us. You may chart the course for yourself on his three dimensional instruments. It's a day's journey in the subterranean drill."

"Have you made that journey yourself?"

"No, but I've conferred with the engineers."

"How many of them have made it?"

"One," said the president in tense exasperation. "The engineer who operates the drill—"

"Only one? Just one person knows the volcano's course, and your whole scheme is based on his word?"

Figuratively the ground gave way beneath Marbl's feet, but he struggled to stay upright. "You don't understand. The spiral course is long and tedious and riding space is crowded even for two passengers. Moreover, not everyone can endure the spinning of the subterranean drill. There's a rotating motion that makes them sick. It's much easier to stay here in the station and watch the three dimensional indicators that follow the drill's movements than to ride in it."

The angry breathing of the dictator subsided a little.

"That's the reason," the president continued, "that most of the work and the cruising is done by one ingenious engineer. He invented the giant drilling machine originally to facilitate his geological experiments. At the time the war struck he was tracing a seam between two underground mountains, and it happened that the upper end of his path rose toward Belligia, while the lower end penetrated molten rocks and reservoirs of steam—"

Jaazel's suspicions eased. The explanation was convincing enough even for his skepticism; still, something stuck in his throat—the realization that, even though well equipped for his incognito adventure, he was still taking a terrific chance. A descent deeper into the earth in a crowded car with an unknown engineer.

"Let me see the man that operates your boring flyer," he snapped.

A minute later a rather tall figure stalked in. He wore an oxygen helmet and a greasy brown "cooler," as the subterranean garments were popularly called, bearing the number 1.

He closed the door of the private room back of

him, glanced from one to the other of the three helmeted, suited figures, approached the table where they sat.

"Have him remove his helmet," Jaazel cracked in a low voice.

The president of Midland arose and introduced himself to the young engineer, who at once removed his helmet and bowed respectfully.

Sondra, gazing through her visor, suddenly slumped in her crusty "cooler," breathless with surprise. The young man before her was Arden!

SLIGHTLY taller than when they had been in school together, white faced from months away from the sunshine, he had more of the mystic's look than ever. That same far-away intensity burned in his eyes, gave a certain mysterious magnetism to his strong face and his whole bearing.

His encased hands went calmly to the table. He stood not quite straight. In spite of his bulky refrigeration suit, she could tell that his gaunt shoulders bent forward a trifle. Like his slightly prominent nose, solid cheek bones and set jaw, the angularity of his frame spoke of a certain urgency of purpose that he held in check.

His smooth voice carried a depth of feeling, Sondra thought; it reminded her of his father's tragedy. She shrank closer into her shell, fearful that a look from him would crack through her protecting helmet and send it clattering to the floor, to reveal her.

Marbl asked, "You're the operator of the subterranean drill, are you not?"

"Yes, your honor."

"These are friends of mine," said the President. "Could you accommodate one of them with a descent to the lava level?"

"One of them—yes," said Arden, "though it will be quite crowded, for there is to be another passenger. You don't mind, I trust?"

Visors and eyes turned upon number 39. Sondra and the President were sure that within his helmet the steel skepticism must have returned to his countenance. In reality, had his expression shown through the mask, they would have seen the crafty face of one who hungered for murder.

For Jaazel saw in the young engineer a similarity to someone he had once killed, and for a moment he felt a reverberation of his strongest passion, the pleasure of cruelty.

Jaazel had never given any consideration to those writers of science—psychiatrists and doctors—who had analyzed his personality, his rise to power, his thirst for war, in terms of perversions toward sadism. But Jaazel never denied to himself that the purges which he personally executed gave him a thrill that thrummed every fiber of his being. At this moment an echo of that thrill came upon him like a ravenous appetite, influenced him to throw cautions to the winds.

President Marbl misinterpreted the silence. "I

doubt whether my guest would care to go under such crowded conditions."

The dictator breathed heavily, still did not speak. "Or, on second thought," Marbl added, "he may prefer to go in company of his own choosing."

Arden spoke without a symptom of emotion. "I shall be glad to respect your wishes, Mr. President. If your guest does not mind waiting a few hours—"

At once Sondra's suspicions went aflame. Something told her that Arden already knew who it was hidden within the helmet and suit numbered 39, that he was playing some desperate game of his own, a game of revenge against his father's murderer, the dictator from whom he had fled—

"I'm satisfied to go now," said the dictator in a low voice. He added that he didn't mind being crowded, and Sondra thought Arden gave a slight breath of relief. "I make only one simple request to insure my safety." Jaazel's head turned toward the girl.

"One request—I wish to take the girl with me."

THE request plainly startled Arden, who had not known to this moment that number 22 was a girl. He seemed about to protest. President Marbl also groped for excuses. He had no intention of subjecting the girl to such a gruelling adventure. The passenger space could scarcely accommodate—

Sondra stopped them. "I'll go," she said.

President Marbl had no comeback. Further protests from him would look too suspicious. The girl must go or the whole scheme might fall through. "Very well," he said.

Number 1, helmet in hand, led the way across the lobby into a room of colored lights that flashed.

Along one side were electrical instruments, dials, controls, three dimensional indicators, alive with the magic of subterranean power. The opposite wall, a series of built-in cases, flamed with the brilliance of geological displays—rare tints and hues, scintillating sparkles captured from the natural formations deep within the earth.

Arden stalled for time. Sondra watched him. His attention continually stole toward the various persons who roamed through the room past the exhibits.

The men who wore red coolers, Sondra noticed, were operators of elevators and mining trains—Arden paid no attention to these. Apparently he was trying to spot his other passenger among the visitors.

"We'll start in a few minutes," said Arden, consulting the time. "Perhaps you would like to see the electric mole* while we wait."

* The electric mole was what Arden called his subterranean drill, so named because it bored through the earth and left an open path for future travel. At slow speeds it could eat its way through rock, projecting a battery of augers that acted upon stone like a buzz-saw upon pulp. Moreover, it contained refining mechanisms that instantly digested the crumbs of its labor, paved its circular tunnel with rifled walls of unbreakable crystal that facilitated future travel, and disintegrated the residue of its diggings. Once it had formed a tunnel, it could spiral through at good speeds, like a gigantic bullet through a rifled tube.—Author.

The President's party followed Arden through airtight doors, out into cavernous passages where the lights were dimmer and the gravity-packed atmosphere more buoyant. They trailed past rumbling machine shops and power plants; came to a great pillar of crystal as large as a circular house, that rose through the floor of stone, extended through the stone ceiling.

The party crowded against a rail and peered into the ominous black pit revealed by an arched opening in the immense pillar, which was in reality a section of the borer's tunnel as seen from the outside. In the shadows the smooth machine-laid interior of the cylinder showed dimly.

"Give us the flood lights, will you, Alec?"

Arden's request was addressed to a husky figure who had crowded up close. His face could not be seen, for he was completely encased in a red cooler outfit. Strangely, the man did not respond, and Sondra caught a look of surprise in Arden's face. Either Alec's speaking equipment was out of order, or this wasn't Alec. Another employee passing the switchboard snapped the lights on.

A mechanic who had the electric mole on an upper level for a last-minute oiling brought it down into view.

The smoothly humming bullet-shaped machine corkscrewed downward through the crystal shaft with the grace and precision of a gigantic shell spiralling, slow motion, through the rifled barrel of a gun. It was built on the proportions of an oil tank.

It came to a stop. Its curved side, ridged with bold metallic threads studded with rollers, glistened like panels of jewels filling the window of a crystal tower.

A small concealed door drew inward, the mechanic emerged. Light gleamed from within the barrel-like opening and the onlookers caught a glimpse of the inner mysteries. In the heart of the vast machinery-filled bullet was space for the operator and two occupants.

While the mechanic answered a few questions, Arden slipped out of the group long enough to exchange a word on the sly with President Marbl.

Marbl said, "I don't know why your other passenger doesn't come. Every arrangement was worked out to the last detail, though he was very suspicious and said he'd kill any man that might give him away. He was to arrive at my office an hour after midnight and come on down."

"Then he should have been on the third elevator after yours, with Alec as his escort," Arden whispered.

"And Alec hasn't shown up?"

"No, but his uniform has." Arden indicated the big fellow in red near the door of the mole.

"I'm afraid there's been foul play," said the President. "Better take a chance on him and go ahead, and don't let him know you know he's Brubbezin until you're ready to defend yourself. Sorry the girl got mixed up in this, but there's no way to shelve her now. Don't tell her our plans either. Good luck."

Arden slipped back into the group.

Five minutes later he and his three anonymous pas-

sengers, huddled in a compact knot of masks and coolers at the center of the powerful machine, spiralled downward.

CHAPTER III

A Floating Man

TWO circling lavender beams of light cut paths into the bottomless pit that yawned beneath the descending machine, illuminated the iridescent cylindrical wall that sank into the depths of thick purple mist. The heart of the electric mole, a tub-shaped wheel within wheels containing passengers and controls, coasted into rotation slowly as the hull accelerated. The four pairs of eyes—Sondra's were widest—peered downward through the apertures to watch the play of lavender headlights which the spinning framework blacked out intermittently like a stroboscope.

Faster. The sight became a flicker of magic color. Soon the speed of descent was so great that the stroboscopic effect was lost, the picture was again solid.

Now and then an object would come drifting up out of the mysterious depths—a plank floating in the heavy atmosphere, just as a gas filled balloon floats in the higher levels—a scrap of electric wire—a rusty spade—odds and ends that had fallen into the shaft, caught in the cushion of gravity-compressed air. A thump and a clatter as the machine ran into them, then they were gone. Again the musical hum of the mole.

Four occupants jammed together as tightly as their bulky coolers would permit.

Close together but worlds apart.

Faster. The sight became a flicker of magic color. Soon the speed of descent was so great that the stroboscopic effect was lost, the picture was again solid.

To Sondra this little group was dynamite. She knew nothing of the husky red-suited man who had joined them at the last minute without a word. But she knew that Arden and Jaazel would be deadly enemies if they discovered each other's identities—and perhaps Arden already knew—

Her heart pounded in sympathy for Arden. How could she blame him if he sought to avenge his father's death? Or was it his nature to seek revenge? You could never tell about these silent, mystical persons.

No, she must keep a grip on herself. She was on an errand for her country. She must see that this wiry, narrow mustached, cold-blooded creature in the cooler next to her, Midland's savior, return safely with his purpose achieved.

And if Arden dared to make trouble . . .

Dynamite? Little did she realize—

THE dictator of Terrany sat relaxed. He had forgotten his earlier misgivings. Accustomed to living in fear of assassination, he felt himself for once isolated from that danger.

He pondered Marbl's proposition, wondered how

he could twist it to his own advantage. If the volcano was indeed ready, perhaps he could turn it loose this very hour, as if by accident, before any bargain was sealed.

But was he so eager to cut the war short with a quick victory? War was his game. There was a pleasurable excitement about it. . . . Again Arden's face crossed his mind. Why did that young man's appearance give him such a glow?

Hovering over Jaazel so closely that an arm weighed against his shoulder was the man in the red suit.

The dictator of Belligia gripped the back of the seat against which he leaned, set his teeth tightly as he dreamed of future battles. He must think fast to have new campaigns ready as soon as he and this ingenious engineer blew up the capital of Terrany, which he had learned only a week before sat on the top of an artificial volcano.

If inspection proved that the young engineer had a sure thing, he'd be in line for a military commission as a reward. Brubbazein was generous with rewards that enhanced his own grandeur.

And what a swell thing it would be for Belligia morale, Brubbazein thought, to blow up Jaazel's capital! A volcano, be it natural or artificial, would seem very much like an act of God! God on the side of Brubbazein's green and silver warriors!

Arden was the only one of the four occupants who spoke, and as he got no answers to his comments (which was exactly what he expected) he soon grew silent. That was well enough. It would postpone trouble until they got to the Lava Station. Plainly each of the dictators expected to get by incognito, and neither knew nor cared who his fellow passengers were.

Arden's gloved hands worked at the controls feverishly. His refrigeration suit worked overtime against his own high temperature as well as the increasing heat from the interior of the earth.

What a situation! Hot trembles flooded through his spine. Never in modern history, he thought, had two hostile war gods been trapped together before. How simply they had toppled. Another hour or two would tell the tale. If the television broadcast would only put their meeting across with the outside world—

But the girl—there was the stumbling block. If he could dispose of her he would have clear sailing, and it wouldn't make any difference what happened to his own life.

One trick was sure to help. He would speed up the descent so that she would become ill from dizziness. Then as soon as they reached the final level he would drag her off into a side room of the Lava Station and let her sleep off her illness while he took care of the world's trouble makers.

He touched up the throttle. Faster—faster!

The little cluster of passengers spun wildly. The sensation was that of a tailspin straight down a plumb line. One by one, three of the occupants felt

the blackness sweep in. They sank together in an unconscious heap.

The blood left Arden's brain too, and for an instant he felt himself going. Then his grip on the throttle cut the acceleration—none too soon. Gray melted through his darkened vision. The machine still sped like a rocket down into the depthless purple mist.

Suddenly a white object drew up out of the deep—something that resembled a human body. Arden cut the throttle, jammed the brakes as hard as he dared, but the momentum was too great. The powerful machine could not stop in time—

It was a man, scantily dressed, floating in the air—air of his own specific gravity. A spectral sight as he appeared to rise up by magic, the whirling lavender lights playing over his white body, limp, drifting.

Like a locomotive engineer powerless to turn out of his tracks, Arden held his breath, awaited the inevitable thump—

Another instant and it had happened. The floating body was a thing of the past. Shattered—gone!

But from the last glimpse Arden caught, three telling details clung in his mind's eye. Clear as daylight a bullet wound showed in the man's temple, his face was the pain-contorted face of death, his left shoulder bore a familiar tattoo mark. Alec!

So that was how Brubbazein had come by Alec's uniform. Simple, direct action—bullets. A sickening shudder came over the young engineer. He glanced at the figures crowded against him. Still asleep.

Breathing heavily, trembling to the fingertips, he held back the speed. The memory of his father came upon him sharply—

Never since the hour of that fateful tragedy had the realization been so poignant that the dreaded dictators were geniuses of crime, whose statesmanship was simply glorified murder braced by glorified excuses that were forced down the throats of their people. Human lives were cheap to them, and woe unto the innocent man who happened to block their paths.

But now that they were at war, what could be fairer than to bring them face to face, let them take their venom out on each other?

Three dizzy passengers in the electric mole blinked their bleary eyes, saw that their pilot still clutched the controls, that the two lavender headlights still sent their whirling spots down—down—

Again, Arden threw pressure on the throttle. Another stretch of sickening speed. The passengers went into a heavy sleep.

At last the tunnel angled outward, straightened out over the deepest floor man ever found, widened into a station.

CHAPTER IV

An Underground Drama

ARDEN unloaded his sleeping passengers. They were easily handled in the buoyant air; he clung

to a cable with one hand to keep from rising.

Once within the air-tight doors of the Lava Station, the atmospheric conditions were less abnormal. This station was artificially walled, having been dug and paved by this electric mole; it was here that Arden had originally found himself at a dead end in descent, for the rock was still in a molten form. Even the thick walls of crystal could scarcely resist the terrific pressure of the expansive steamy substance.

Arden glanced hastily through the crow's foot of passages, a series of dead ends that testified to the electric mole's struggle. He was gratified to find that only a few minor breaks had appeared since his last visit; the impouring lava had stiffened, clogged its own passage through the walls.

He dragged each of his companions to a separate wing, left the neon lights burning dimly, hastened to the power room to step up the refrigeration plant. The threaded crystal floors were unbearably hot. It would take a few minutes for the air to cool and the fumes to clear. Meanwhile, the oxygen helmets were needed.

He telephoned to the Lower Terminal, which was now twenty-five miles above.

"President Marbl? . . . Everything okay so far. They're still asleep from the ride. . . No, they didn't suspect a thing, so we're all set. My telecaster is already switched on, so go ahead with your connections. I hope you can pull in all the networks . . ."

Arden hung up, whirled to his instruments, scanned them with a practiced eye. As always, his heart gave an extra jump as he caught the new oscillations on the seismographic record. He noted from another instrument—a thick steel tower through which lava circulated—another slight rise in the index to the pressures that thundered constantly beneath the crusty floor. Without instruments, that ominous sound was almost inaudible, but Arden trembled to realize the direful power back of that low rumble.

Back to his victims.

Jaazel still lay against the wall, his eyes closed. Arden dug into his cooler, found a pistol, removed it, hurried on.

Brubbazein's frame rocked slightly as Arden removed a weapon from him, but settled back to a comfortable position on the floor. A sleepy groan. No time to waste now. The husky dictator would soon come out of it.

Arden chased into a third passage, hoping the girl would be dead asleep. No such luck. She was up on one elbow. She saw him approach, got to her feet unsteadily, reached to remove her helmet. Arden did not restrain her, for the air was clearer now; moreover he was curious to see her face, to know what sort of person he had to deal with.

He stopped short, stared. "Sondra!" he said.

Lighted by the soft glow of neons reflected off the iridescent walls, the beautiful face was revealed to him—the deep colored waves of hair, the fine white skin, lustrous eyes, lips parted in a half smile.

"YOU—you still remember me, Arden?"

"Remember you! Of course—" He reached out for her hands. Their clasp was encumbered by the bulky gloves but they didn't notice that. Arden hastily removed his own helmet, his face was very close to hers, his expression was one of mingled discovery, delight, and—most of all—utter bewilderment.

"Sondra, I can't believe it! It's been four years since—" The gladness in his countenance waned, as if he had allowed himself to be too much carried away by surprise. He glanced back into the big open room impulsively; the lines about his mouth tightened, he turned toward her sternly.

"Sondra, what are you doing here?"

Her radiant look faded. Her eyes fixed upon the two pistols jammed through his belt. Her stare was the only answer she offered. He bristled with defense.

"Sondra, I've got a big job on my hands. I don't want you to misunderstand me—I'd like to tell you everything—I will if we get out of this alive—but just now—" Another sharp glance toward the big room. "Sondra, will you help me?"

There was a vibrant appeal in his voice that shook her, magnetized her as back in her student days when she dared to be fond of him. But now—she must keep a grip on herself.

Accusation showed through her steady eyes. She shook her head slowly.

"What's happened to you, Arden? You've changed since I first knew you—"

He was silent. Of course he had changed. She must have known that after his innocent father was purged—upon a pretext—

A note of sympathy came into her voice. "I don't mean to hurt you, Arden. I know how cut up you were—and yet—I saw the change coming over you before I left—and I—I was afraid!"

"And now?"

"I'm more afraid than ever. I've lost touch . . . Why didn't you ever write to me?"

Arden turned his eyes away, spoke impassionedly. "I couldn't after what happened—after what I did. You must have heard. I ran away from Terrany the week I was to have gone into compulsory military service." His eyes turned back upon her; his voice went defiant. "I couldn't go into it! Everything within me revolted! I couldn't! Don't you see! It was all a farce to me—and it still is, even though my native country is at war! War for what? The amusement of our great dictator! How could I fight for a criminal like Jaazel? I tell you my own principles wouldn't let me!"

"I wish you had written me, Arden."

His tall taut frame drew closer to her. He looked into her lovely face, seemed to breathe in an inspiration of human tenderness long forgotten. "Sondra," he said softly, "I often dreamed of you after I came here to the mines—dreamed that some day I'd see you again—maybe meet you by chance, like this, and we'd have a chance to talk about—lots of things . . ."

Sondra's face lighted to know he felt that way. She smiled, not knowing what to say.

THE far-off mystical look returned to his face. "After you left—after my father was murdered—I began to see what was happening to everyone in Ter-ran-y. I saw Jaazel waving his high sounding ideals at us with one hand and branding us into inhumane beasts with the other. I knew for the first time that his system was rotten to the core, and we were all the goats. But I wanted to prove it, I wanted to know whether he himself believes in the things he makes my people die for." He turned to Sondra sharply. "Do you think he does, down deep in his heart?"

"I—I don't know."

"Or is he just pulling the wool over his own eyes with all this talk about saving civilization—doing it to mask the fiend that's down inside himself feasting on murder?"

"I can't answer that, Arden . . . I—"

"It's a question that ought to be answered!" The depth of feeling in his voice shook Sondra. What a dramatic figure he was, a giant of courage, his nerves sharpened to a fighting edge. "And maybe it *can* be answered—this hour—for the whole world!"

"What do you mean?" Sondra's lips trembled. "Jaazel came down here at President Marl's request, to inspect a war device. It's my duty to see that he gets back—"

"He won't get back. Not the way he came. I can promise you that!"

Terror came into Sondra's white face. She glanced at the gleaming weapons. "Not in cold blood, Arden!"

"No. I won't lay a hand on Jaazel if I can help it—but our other passenger might."

Sondra's trembling hand touched her shocked mouth. "Then you've—you've brought a thug along to do the deed for you!"

"Exactly. One of the most skillful thugs in Europe. He ought to be a perfect match for Jaazel. His name's Brubbazein."

"Brub—" the girl gasped. "You mean that man in the red who came down with us was—"

"Brubbazein. He's here for the same purpose as Jaazel. His visit was arranged by your honored President. The same thing goes for Brubbazein. They're both here and if they're awake by this time they're each in a stew to blow up the other's capital. That's why I—"

He felt Sondra's fearful stare grow cold upon him.

"I can't let you do this, Arden. I can't betray President Marl. I'm bound to see that Jaazel gets a square deal."

"He'll get whatever deal Brubbazein gives him!"

Sondra shrank backward. "Then this is all a trick to avenge your father's murder!"

"No, Sondra, you don't understand. It's something far bigger than that." Arden took another step

toward her, his brow twisted painfully as he strove to make himself clear. He couldn't find words for it. Her sensitive face—how could he make her understand that this was not simply madness? "Sondra, you shouldn't be here. The very sight of you makes me go soft. It was always that way with you and me. I needed to be bitter and hard—that was the only way to satisfy the fire inside me—and you wouldn't let me—you couldn't stand the cruelty. But I've got to go through with it now. I've got them here . . . I've got the television receiver . . . It's on—now—in the big room—so the world can judge for itself."

"The world—?" Sondra's eyes fluttered. At last the meaning began to dawn upon her.

"The world will see them come together—two war gods—pitted against each other. They won't know they're being watched by anyone except you and me. They'll reveal themselves—they'll give us the answers that are at the heart of the world's trouble! You'll not interfere with this, Sondra—you'll let it go through?"

"I'll not interfere," said the girl weakly. There was no other answer, even though the fears that shot through her were sharpened by the knowledge that Jaazel had brought her here as a shield in case of personal danger.

The trudge of heavy footsteps sounded. Shadows criss-crossed through the large cavernous room. The husky figure in the red cooler strode into view.

Arden slipped the guns out of his belt, hid them in his oxygen helmet which he carried like a basket, and went forward with a slow, easy stride. Sondra followed.

CHAPTER V

Volcano for Sale

"ONE by one my guests are coming to life," said Arden casually, turning bright lights on throughout the crow's foot of passages as he passed a switch-board. "How are you feeling?"

He got only a muffled grunt for an answer, which was as much as he expected from a dictator concealing his identity.

"The spin usually affects passengers that way, and the heavy atmosphere down here makes some very sleepy. But I've got the pumps working, it's getting cooler, you'll be all right now. It won't take us long to look around."

Brubbazein grunted again.

Soon the other helmeted figure came to life, came rushing out of his corridor with considerable agitation but hastily regained his poise when he caught sight of the waiting party.

"And now that we are all ready," said Arden suavely, "we'll review these geological curiosities systematically. But first, would you gentlemen care to remove your helmets? I'm sure you'd find it more comfortable and congenial." Neither man acted

upon the suggestion. "Very well, we'll proceed."

There were numerous gadgets to explain and demonstrate. Here and there Arden pressed levers and jets of live steam shot across the floor or whistled overhead. One faucet released a blast of black smoke; another, with a heavily insulated hose and nozzle attached, produced a fine spurt of lava that splattered the arched ceiling like molten lead. The round stones that lay loose on the floor, Arden explained, were simply globules of lava that had stiffened.

Farther on was an instrument that enabled them to hear the thundering torrent of lava bounding up like a million geysers of hot metal against a ceiling somewhere beneath them. None of the party, regardless of hidden anxieties, could fail to feel the thrill of dynamic power that lay hidden here. Pity the man that chanced to be on this spot when the subterranean hell broke loose.

But the one object that stuck in their eyes from the first was the large hand lever conspicuously rising from a small platform in the center of the main room.

Each time the party moved from one dead end corridor to another they passed it. They saw the printed directions it bore in bold yellow letters.

The lever stood at dead center. One arrow pointed outward to the word Terrany at the right; the opposite arrow pointed leftward to the word Belligia.

"And now we come to the most interesting feature," Arden's monolog continued in tourist-guide fashion. "This lever—"

The dictators drew too close to the object for comfort.

"Keep back off the platform steps, please," Arden warned. They backed away. "This lever is a delicate trigger connected with two vast stores of explosives, buried back in two of the corridors we have just visited."

"Two!"

Arden was uncertain whether it was Brubbazein or Jaazel who spoke, or whether both in unison. Each visor was turned toward him.

"These two stores of explosives were planted originally to blast openings from the volcano beneath us, to relieve the pressure if it became dangerous; perhaps eventually to clear the path for further descent. However, it was necessary first to drill outlets, hence two angling tunnels were cut toward the surface as lava lead-offs."

"Two?"

This time Arden was certain both men spoke.

"Two," he answered. "I find that visitors are always interested to know where these tunnels go. Well, one of them follows a seam between underground mountains and rises toward a city in Belligia. The other, by chance, leads to Terrany. Hence the marks on this lever."

"Just *where* in Terrany?" came the voice of Jaazel, badly disguised.

"By a strange circumstance, to a conduit subway

beneath the national capital of Terrany."

Through the electric speaker in Jaazel's helmet a hard gulp sounded.

"And the other?" the husky figure in red demanded in a hoarse voice.

"To the Belligian government buildings. Quite a coincidence, don't you think?" Arden was the only one who laughed, and his effort was distinctly strained. "Some of our visitors have remarked, now that the war is on, that one false move from this lever might wind up the trouble in a hurry. What do you folks think?"

Dead silence. Arden could feel the wrath gathering.

"It does seem," he continued, "that it would be an easy way of accomplishing exactly what each of the dictators wants to accomplish. Don't you think so?"

Another silence, heavy with tension.

"Some folks say to me, why don't you go ahead and shove the lever one way or the other and stop the damned war?" Arden chuckled as if he were talking to himself. "Gosh, it does sound tempting." He placed a foot on the first step, gazed at the object of his discourse. "But I always tell them I can't make up my mind which way it ought to go, and then ask them if they want to make me an offer to thrust it in the right direction. Well, nobody's made me a decent offer—so far."

Arden moved up the three steps, stood on the little platform. In one hand he still held his helmet, its contents concealed. The other hand he placed on the lever.

"Perhaps," he said with an ironical smile, "some of you visitors would like to make a bid . . . Here we are, open for business."

Number 39's shoulders drew up tightly. His angry breathing was audible.

The husky figure in the red cooler stood stiffly, passed his glare from one to the other of his companions; his visor came to rest on the one person, other than himself, whose face was hidden.

Arden monologued on in his quiet voice. Gradually his words grew crisper. "I assume you're all wide awake by this time. Surely you're not going to let a good opportunity slip by. All joking aside, I'm in the mood for action. It wouldn't take much to make me blow up the Belligian capital. Today the great dictator Brubbazein shot and killed one of my best friends."

The three persons stood paralyzed for a moment. Up to now the two hidden dictators had thought perhaps the young engineer was simply chattering to hear himself talk. But the gleam in his distended eyes arrested them. Was that gleam a fighting challenge or something insane?

Brubbazein, closest to the platform, moved backward a step. Jaazel reached his hand out as if to catch Sondra's arm. She was a few steps out of reach. He gave her a swift glance as if to remind her she was his protection, returned his eyes to the bold speaker.

"And now that I think of it," the young man's lips

drew down, "I could blast the capital of Terrany off the map without blinking an eye—for a certain dictator named Jaazel murdered my father!"

With these words the speaker let a glove drop from his right hand. He dipped into his helmet, brought up a pistol.

"Take off your helmets, you cowards!" he demanded.

CHAPTER VI

The Challenge to Fight

BY this time hundreds of thousands of televisors over central Europe were tuned in to bring the strange underground drama before puzzled spectators.

Suddenly the television world was aghast. Helmets removed, the two mysteriously reticent figures became no other than the two great dictators in person!

What was this—a faked show? An impersonation? A new brand of propaganda? No, seeing was believing, and no one in the civilized world could mistake the faces of these two much photographed war gods. Moreover, their voices—

"What happened to my gun?" the dictator of Terrany barked.

The lean young man on the little platform set his teeth. "You've no need for a gun. Brubbazein doesn't have one."

The wiry, black mustached dictator tossed his oxygen helmet aside and took a threatening step toward the young man with the pistol. There was powerful defiance in his perspiring face. The hosts of invisible onlookers fully expected him to pounce to the platform and overpower the keen-eyed boy with sheer pressure of a domineering personality.

"You can't get away with this!" he snarled. He leaped forward.

With a quick step, Arden's toe pressed a button in the platform floor. A screen of live steam shot outward in all directions from the base of the steps. Jaazel threw his arms up over his face. Then the white cloud filled the picture. The television audience heard the long hiss of steam, saw nothing except the dim figure of the girl escaping from the scene.

Over Terrany the word spread as fast as radio could take it. History's most sensational news caught in the very making. Jaazel was trapped. Trapped with Brubbazein. Foul business. Both capitals quickly denied any knowledge of the plot. President Marbl's staff were completely baffled.

Whatever the mystery back of it, the masses of people and regiments of soldiers went wild with excitement, crowded over televisors enthralled.

"The dictators have come together!" The newscasters screamed. Everywhere regular television service switched off scheduled programs to cut into the sensational drama. News commentators slipped words of interpretation in edgewise now that there was a

silent moment. Here it was at last, they said; the clash of the world's two great heroes, inflamed at each other from years of hostile relations, their angers at fever pitch from three months of devastating warfare. How they had come together was still unknown, but . . . "here they are glaring at each other through the mist. The war is in their hands now, ladies and gentlemen! Like the giants of old who stepped forth from their armies . . . Brubbazein and Jaazel, ready to fight it out!"

JAAZEL was the first to speak. He shot curt words at his husky, blond-haired enemy. "Who planted you here?"

The iron man of Belligia glowered at him. "Nobody plants me. I'm no pawn. My mistakes are my own—and that goes for this one."

The two iron men looked each other in the eye. The invisible hundreds of thousands of spectators, whether in Terrany, Belligia, or elsewhere, could not mistake that exchange of looks: it betrayed a light of common understanding.

"It's obvious we're both victims of a cheap trick," Brubbazein added.

Jaazel nodded. "A frame-up to bring us together." He looked about hopefully for the girl but she was nowhere to be seen. He turned upon Arden, who still occupied the platform. "All right, here we are. You've pulled us in with a fake volcano—"

"Fake?" Arden's ejaculation was defiant.

"Here we are. Go ahead and have your laugh, then get me out of here. I've got business—"

The dictator of Belligia, fists on his hips, broke in with an arrogant challenge to the young engineer. "I'll call your bluff on that artificial volcano, you damned upstart! Cut it loose and rip my capital to pieces if you think you can! Go on! Do it!"

The two war gods started to charge him, shaking their fists. Again the steam blast hissed. The challengers writhed, fell back.

"Well," Brubbazein groaned, touching his scalded face painfully, "what's your game? What do you want out of us?"

Arden's steady eyes gleamed through the clearing fog. He stood like a delicately poised statue before the glare of the two enraged dictators. Chills played through him. This was the moment he had lived for.

"I thought you two were at war with *each other*," he said. They continued to stare at him. "Then why don't you fight each other?" Silence. "Well, here you are. What are you going to do about it?"

"Nothing," said Jaazel dryly. "You must be a simpleton if you think this will get you anywhere."

"I want you to *fight*!" Arden shouted. "For years I've heard each of you rave about what a menace the other is. All right, give us a demonstration of how you feel! Show us what you'd do if your armies were standing back of you, looking on—"

"Crack-pot!" Jaazel yelled. "Damned imbecile!" With a slight turn toward Brubbazein, "He doesn't

know the first principles of modern warfare."

The two dictators apparently had no intention to fight. At a safe distance from his platform Arden had planted hydrants with hoses and nozzles attached, to give them the opportunity to shoot live steam upon each other if they desired. Not so deadly as machine guns, he reminded them, nor so painful as the flames which they made their soldiers use upon each other, but at least they could express their feelings toward one another.

They only snorted in disgust.

Red anger shot through Arden's face. "Jaazel, what kind of man are you? I want to know. You've roared to Terrany that the one person responsible for the world's trouble is Brubbazein—just as he says the same thing about you. You tell the people they can't have the kind of world they want as long as his regime lasts. They must cut a path of blood to get to him. All right, then stands Brubbazein!" Arden fairly screamed, feeling his plan turn to dust in his hands. "What are you going to do about it?"

"NOTHING!!!"

"Jaazel, if the people of Terrany could hear you say that—"

"The people be damned!! I know what I'm doing. I stand ready to negotiate with Brubbazein when the time comes—after our fighting fools have had their fill." His eyes flicked in Brubbazein's direction, caught the hint of an approaching nod.

"I regret," said the Belligian war god in a stentorian voice, "that this embarrassment has arisen. Mr. Jaazel, you have voiced my sentiment as well as your own. This damned hot-head doesn't seem to realize that what we tell our people is necessarily a very simple version of the real issue. If we told them nothing but the truth, the saps wouldn't fight. We've got to prime them with plenty of war juice to get any kind of results. For you and I know, Mr. Jaazel, that our difference is worth fighting for!" His manner became elegant. "It is rooted deeply. It must be resolved in blood!"

"Whose blood?" Arden cried. "If the people aren't capable of understanding the issue—"

"They're quite capable of fighting and dying. That's their share! Let them go to it! After the smoke of battle has cleared there must be men of vision to come together and make peace."

WITH a sickening feeling Arden knew his plan was spent. If their words had carried out to their people by television, perhaps something had been accomplished—perhaps a little of their sham had registered. But the hope of forcing them to fight out their own troubles—that was vain. Men of vision indeed!

"The smoke of battle is clear down here," cracked Arden, "and you can take all the time you want to negotiate."

The men edged closer together as if they wanted to confer in private. All right, he'd leave them here and

let them confer till they rotted. It seemed a harsh thing, but it was kindness compared to the hell they sent their soldiers into.

They were well back from the platform now, but not out of range of the concealed television receptor, for Sondra—unconsciously it had warned Arden's heart to catch glimpses of her from time to time—lurked in a shadowed corner, kept the instrument turned on them to best advantage.

The receptor was shelved too far away, however, to hear the low words which Jaazel spoke to Brubbazein.

"I know who this person is—he said I killed his father—now I recall the resemblance to one of my traitors—caught in a purge. Later the son escaped the country. That's our cue. A runaway. If we threaten him, we'll find him a coward!"

Brubbazein muttered, "He doesn't act like a coward to me—"

"Help me corner him," Jaazel said through tight lips, "and I'll put the works on him—with pleasure!"

"Let him talk himself out first," Brubbazein mumbled, "then we'll split and get out of range of that steam and . . ."

"And find the girl!" Jaazel snapped.

Arden shouted at them again. Though the telecaster caught up his words, they seemed only a hodgepodge of meaningless instructions at the time. The two chummy dictators appeared to ignore them, but the time was not far ahead that they would recall them to the last detail.

Then as they backed farther away and began to divide, they saw him beckon toward a corner nearby.

Almost on the instant Sondra reappeared. She fled across the open room. She and Arden tried to make a break toward the exit. But the cumbersome refrigeration suit and the bold crystal threads that striped the floor played havoc. Sondra tripped, spilled.

Arden and Jaazel were about the same distance from her as she went down.

There were millions of television watchers and listeners by this time. Most of them were still stunned by the very intimate revelation of war gods they had just witnessed—war gods with the shell of deceit cracked off. Consequently there were millions who saw something unspeakably treacherous in the glitter of Jaazel's eyes as the girl fell.

They saw him spring into action, leap across the floor to seize her. They heard Arden's breath as he plunged to her rescue, saw Arden's helmet roll back of him spilling two pistols. And they could not miss seeing Brubbazein's determined jaw as he followed into the fray, scrambled for the weapons.

One instant Jaazel was on his feet, the next he staggered from a left to the jaw. A right followed through. Another left. He went down.

The young engineer turned to face the dictator of Belligia, who, tearing a left hand out of a glove, jabbed a trigger finger through one of the pistols.

"Higher!" Brubbazein growled. "Leave the girl

alone. You're the one I want. Come on—*now!* We're going! You're going to take me back."

Sweat streamed down the big man's face. His gloved hand held the second gun awkwardly against his body. He brought it into his grasp. Keeping the business hand carefully poised, he gathered up his helmet and glove.

Jaazel was still down, his eyes half closed, as the larger dictator forced the engineer toward the door. Sondra had apparently gone into a faint.

"They can look out for themselves," Brubbazein snarled. His heartless words rang through the telecast even though he and his prisoner moved out of the picture.

At once the girl looked up, crept to her feet, slipped off in another direction. For the moment the breathless world saw only the prone figure of Jaazel. They could still hear voices, however. Brubbazein's orders. The young engineer stalling for time.

"So you're going to leave the volcano to Jaazel!"

Brubbazein's heavy trudge stopped. "It's a fake." "Do you think so?"

From his bluster of words the Belligian dictator was evidently caught between courses. Then he came back, marching his prisoner ahead of him, headed straight for the little platform.

Jaazel came up to a sitting position in time to see them march in front of him. They moved as with a single purpose. Brubbazein was so intent he didn't look to either side until the shadow of the girl crossed his path. Five yards from the lever he turned with a jerk, saw what was coming.

To the television audience there was simply a slushing sound like the splash of hot metal. A black stream cut across the picture to strike Brubbazein's hands. Steaming lava. A gun shot went wild. Everything dropped from the big dictator's hands, he gave a sharp huff of pain.

The girl and the boy ran out. Doors sounded. A machine rumbled and hummed away into dimness.

CHAPTER VII

Two Capitals Wait

BACK in the whirl of the electric mole again, Sondra found relief in a stupor more genuine than her recent faint. An hour later she awoke, was alarmed to find Arden crowding the throttle as if it were a matter of life and death.

"I want as much elevation as I can get, just in case they should set off the volcano," he explained. "I've planted a number of safeguards through this shaft—still—" He made an effort to relax. "We're probably all right by now."

"Then it's really so?" Sondra gasped. "The tunnels and all? It would really blow up both capitals?"

Arden nodded. "They doubted it, but if they meddle with that lever—"

The girl shook her head. "What a jolt that would

be! Think what a shake-up it would give the war!"

"Speaking of shake-ups, I only hope both warring nations got to listen in on what they said. I thought my scheme had failed at first, when I found they wouldn't fight. But, as I look back on it, their words may prove more explosive than any volcano. It wouldn't surprise me if the troops on both sides made some decisions of their own after this."

He cut the speed to a more comfortable gait.

"Thanks," she murmured. "I'm still rather dizzy—though it's partly from the whirl of events," she added, laughing. "Do you think the dictators will manage to get out of their tunnels as you instructed them?"

"It could be done, but I don't know . . . We also left them the guns. I think we've done our duty by them."

He slackened the speed a little more, turned to her, smiling. "We're out of danger now, I'm sure . . . I want to talk about us, Sondra. It's what I've been wanting for four years, and now, all at once here you are—right beside me—almost in my arms."

She drew closer, and he put his arms around her. "It's a curious world," he said. "It gets in some devilish tangles, and some of us get twisted and crushed till we don't know whether we're still human—"

"There's nothing crushed about you," said Sondra. "You've practically tied the world in knots today."

"Maybe," he smiled broadly. "Anyway, now that that's off our shoulders and we've done all we know to do, it doesn't seem nearly so important to me as—"

"As what?"

"As finding you . . ." His lips found hers, and again she found herself whirling dizzily . . .

Miles below them a tense drama continued. Miles above, the world watched, waited.

And though the drama seemed at a standstill, few of the millions of unsuspected watchers could tear themselves away from their televisions. The vast majority, including hosts of entrenched soldiers, government officials the world over, news correspondents, common people stunned from being called fools by their leaders—held on for the last ounce of bitter truth.

For most of two hours the world's two great dictators simply sat, talked little, seldom looked at each other. Their harsh brooding expressions were clearly visible under the blaze of lights.

The thing which gave a magnetic tension to their arrested drama was the object which stood between them—a small dark platform only three steps high, from which a lever extended straight up.

Their eyes continually roved to this object. They were far from aware that every glance toward it sent thousands of their subjects scurrying out of the capitals—for by this time the listening world was assured by alert commentators of its unspeakably dreadful function.

When they grew silent, the television audience became all the more enthralled, for the news commen-

tators carried on, pondered what schemes might be revolving in their minds, discussed every chance action and clue.

In a low, mumbling conversation, the two trapped men spoke of trying the perilous escapes the young engineer had indicated. Time was precious. There was no chance of a rescue down here. They agreed to take their chances on their respective tunnels.

They rose to go. Their guns still lay on the floor in the foreground. They decided to leave them untouched. Except for an occasional, almost indefinable indication given here and there—a sharp glance, a nervous twitch of the fingers—which only the most alert observer could catch, the breathless world might have believed these deadly enemies were ready to part on terms of trust and friendship. If Jaazel knew that Brubbazein had once got the upper hand on the young engineer and nearly slipped away, leaving him flat, he evidently chose to forget it.

The men shook hands, took up their oxygen masks, turned their backs upon the television audience and started away, Jaazel toward the corridor on the left, Brubbazein to the one on the right.

AN alert news commentator who had recorded Arden's strange words of instruction two hours before, now reread them.

"You've each got one chance to get back to your capitals." At the end of that left corridor there's a valve entrance to the big tunnel that leads up to Ter-rany. In the right one, an entrance to the Belligian tunnel. Once you get in, you'll find the compressed air so buoyant that you'll rise part of the way. When that runs out, remember the threads in the wall are deep. Each tunnel runs on an angle. You can climb. I'll inform your governments where to look for you."

The two dictators trudged out of sight. Minutes passed.

Back into the picture came Jaazel, slipping along stealthily, his eyes on the lever. He grew more cautious as he neared the point where their ways had parted.

From the other side of the projecting partition Brubbazein reappeared. He too moved with caution, looked toward the same goal.

At the corner they met, faced each other. Again a suave demeanor on the part of both.

"I was coming back to call you," said Jaazel, "to make sure you found your entrance."

"Yes, and you? . . . We're all set, then."

Again they parted. Again the picture seemed deserted. Then Brubbazein came back, marching brazenly past the corner straight for the platform.

Jaazel scurried into the picture, hailed him sharply. "What's the idea?"

"Come here," Brubbazein retorted. "Something occurred to me. See how the arrows on this lever point. Just opposite from the direction of our passages. Did you find a label on your entrance?"

"No," said Jaazel. There was angry suspicion in his glare. "What are you driving at?"

"I think that young traitor switched tunnels on us. He was just clever enough to try to send me up to your capital and you up to mine!"

Brubbazein held his bold front against the other's scornful look.

"So you thought of it, too," said Jaazel. He was sure Brubbazein had snatched at this straw only to appear innocent of any designs on the lever, but there was something in the idea. Yes, on second thought that's the very thing the scoundrel would do. "I was about to call you to say the same thing. We'd better think this thing over."

They sat down again and began to reason out which tunnel was which.

Twenty-five miles above them the electric mole at length emerged from a leisurely ascent, and Sonda and Arden emerged.

Everyone in the Lower Terminal was crowded around televisions, but President Marbl hurried to greet them and congratulate them. The light in his face was glorious to see.

"Has anything happened?" Arden demanded. "Did they set off the volcano?"

He was relieved to know it hadn't been touched.

"Did they ever fight?" Sonda asked.

Again the beaming President shook his head. "No such luck. They talked and pondered about the tunnels until they were almost chummy before they finally parted."

"Then they've gone!" Arden's eyes gleamed with eagerness. "Did they take their own tunnels—or each other's?"

"Their own."

A sickening disappointment showed in Arden's face, but only for a moment.

"It's all right," said the President. "In fact it couldn't be better, for the radios from both capitals announce that popular revolutions are on in full swing. The people of both nations have overthrown their dictatorships with lightning swiftness, and there's a nice little mob waiting at the top of each tunnel for any dictator that shows his face."

Before either Sonda or Arden could catch a breath to speak, the President added, "You two will have to take a week off to read your telegrams. They're rolling in by the thousands from all over the world."



MYSTERY OF THE WHITE RAIDER

(Concluded from Page 69)

"I had then to decide how best to find out where the medallion was. How better than as the head of the Scientific Bureau? They, in an effort to catch the White Outcast, might discover the medallion's whereabouts quicker than anybody.

"So, having studied Calman carefully beforehand in readiness for such an emergency, I took his place—killed him on the night you found my companion's body on the gallery. Calman's body I merely rayed out of being." He said it coolly, unemotionally.

"One point," Burke put in. "Why did you change back into your Outcast pose when you made your attacks on the antique dealer and the inventor? Could you not have done such things as Calman, made your search under the pretext of police routine?"

"I could, yes. But while you were around, I knew it would arouse your suspicions if the chief of the Bureau started doing that kind of thing. Better to do nothing that the real chief wouldn't bother himself about."

Burke nodded slowly. The Outcast went on calmly, matter of factly.

"I used my dead companion as a dupe, certainly. As I have already said, I tried to be rid of you and Sphinx Grantham without casting suspicions on my own bogus identity. Once I got the Bureau under my control without you two worrying me, I could probably track that medallion down in no time.

"I tried all likely people—or rather, I intended to. I only managed a calligrapher and an inventor before you caught up with me. I felt certain the inventor was the one because, according to newspaper reports, his invention was identical to the likeness on the medallion."

"These twelve inventions," Burke mused. "I presume that every detail of each one is on the medallion in microscopic writing."

"Exactly. The actual machinery can only be built with the medallion formulae. Otherwise, we only know what the inventions are—without knowing how to construct them."

Burke said, "Had you told us what you were seeking, to begin with, we would have helped you."

"I think not." The Outcast shook his head.

"Twelve engines of destruction would interest the war-loving scientists of this planet far too much. Such men could have become enemies of my own world at

a none too distant date. No, it was better I found the medallion intact, with its secrets unrevealed."

He got slowly to his feet. Then suddenly he whipped back his sleeve and rammed something into his arm. Too late, Burke dashed forward to get a look at the tiny splinter.

"For an Outcast to die when his mission has failed is surely logical?" the Uranian asked quietly. "I have fought for my planet; you for yours. Both of us, I think, have lost.

"You wondered about my space ship. It is three hundred miles from Earth, held by automatic beams. It will only come down when this is operated—"

He whipped an object like a watch out of his pocket, flung it on the boards and ground it under his heel.

"When you solve space travel, you can have it," he said dryly.

Suddenly he fell back into his chair, breathing hard. With a final convulsive movement he became motionless and relaxed.

Burke turned away quietly.

"CIGARETTES, Sphinx. I want to think," Burke said, as they went back to the office. He flipped a coin on the desk.

"Okay—but I wish you'd use real money." Sphinx held up the dud coin for the second time in two days.

"Oh, hell—" Burke began irritably. Then suddenly he snatched the coin from him and stared at it; at the roughed surfaces smothered in tiny, microscopic lines.

"My God!" he gasped.

Without another word Burke raced to the autopsy room in the morgue, where the Outcast's body lay. Rapidly he searched out the small magnets from the pockets. Instantly the coin clung to them.

"That's it!" Sphinx yelled. "The medallion! Even when he was near you, your pocket held it in, stopped the thing from contact with the magnets. Lord, if you'd only known! If he had only known! But how did you ever come to—"

"How should I know?" Burke asked quietly. "Dug up by workmen, I suppose. Handed around as a false coin, got into my loose change somewhere. I may have had it for ages. Funny as hell, isn't it?"

Burke smiled faintly as he gazed on the Outcast's dead face. "You know, the fellow was right in some things," he added. "About war-mongering, for instance— Never mind those cigarettes right now, Sphinx. We're going to the river bridge. I've something I'd like to throw over the parapet. . . ."



PRIZE STORY CONTEST

Now that FANTASTIC ADVENTURES has gone monthly, we are skipping the announcement of prize winners for this issue, but this does not mean we are skipping the prize award. It simply means we must balance up the time element. Awards for the January issue stories will be made in our March issue. It is necessary to allow readers time to get in their votes. After the March issue, the policy of awarding prizes for the second previous issue will hold constant.

We have noted recently that many votes come in too late to be included in either the tabulation of position, or to be awarded a reader prize. Therefore, we suggest that you don't delay in sending in your coupon immediately you read the stories, and make sure you are eligible for that Ten Dollar Reader award. Since FANTASTIC ADVENTURES appears on the 20th of the month, this means that in order to establish an award for the second following issue, the deadline for votes is the 15th of the month following date of issue. Thus, for this issue, your vote should be in by January 15. Any votes received after that date will not be eligible for a prize.

This month, we are awarding our usual prizes: \$75.00 to the author of the best story in the issue, and \$25.00 to the author of the second best. To the reader who votes most nearly correct: i.e., whose rating most nearly coincides with the final published rating, and who writes the best letter of twenty words or more, we award our usual prize of \$10.00. In case of ties, duplicate awards will be made.

Some of our readers object to cutting up their magazines. For those who desire to do so, a letter, or a postcard, listing the stories in the same order as the coupon, will be equally eligible. It is not necessary to fill out the coupon to win.

You will note that this month we begin the first serial story to appear in FANTASTIC ADVENTURES. It is Phil Nowlan's "The Prince of Mars Returns." No award will be made to a serial, until the final installment. Be sure to vote on the last installment of a serial story, but be sure to vote on every other story in the issue, since you can't win, obviously, if you don't.

USE COUPON BELOW OR A REASONABLE FACSIMILE

FANTASTIC ADVENTURES,
608 South Dearborn Street,
Chicago, Illinois.

In my opinion the stories in the February issue rank as follows:

Story	No. Here
NEW YORK FIGHTS THE TERMANITES	
THE PRINCE OF MARS RETURNS	
LANCÆLOT BIGGS COOKS A PIRATE	
THUNOR FLEES THE DEVILS	
MYSTERY OF THE WHITE RAIDER	
LET WAR GODS CLASH!	

Enclosed is my letter of 20 words or more giving my reasons for selecting story number one for that position. ☐ Check here.

Name

Address

City State

»»» Introducing ««« THE AUTHOR

PHIL NOWLAN

Author of

THE PRINCE OF MARS RETURNS

AND I'm pleased to meet you too.

In the first place, I don't know how to write an autobiography. And in the second, nobody would find it violently interesting if I did. Buck Rogers has taught me that.

Kids get very much excited about meeting the author of Buck Rogers—before they meet him. But when he walks into the room, and mother says, "This is Mr. Nowlan, Jackie. He writes Buck Rogers," Jackie gives an incredulous, almost scornful stare, and you can see him thinking (sometimes actually hear him say) "He does *not*! Where's his rocket gun and flying belt?"

It's really embarrassing at times, especially as I've never so much as been up in an airplane! I'm just the Pop of another family of ten kids, who, about a decade ago, got so sick and tired writing about business science and news that he went green in the face and revolted.

Buck Rogers was the result, and he made his first bow in AMAZING STORIES, under the titles of "Armageddon, 2419 A.D." and "The Air-lords of Han," later appearing in the newspaper strip bearing his name.

But "Lilrin," the heroine of this new story, didn't develop out of business statistics and charts. She was the product of much heavy mooning over the mystery of Earth's "blond line," which science has never been able to explain.

Why were the blond races, so far as all historic and prehistoric evidence indicates, centered along an imaginary line running from Scandinavia, up the Rhine valley, down the Danube, to Asia Minor, to Africa, and then westwardly until it evaporates?

The well known, and well worn, theory that it's all a matter of pigmentation resulting from degree of sunlight is sheer bunk. The Esquimaux and Siberian tribes are not blonds. Neither are there any blond aborigines south of the Equator in either hemisphere.

But we do find blonds in Scandinavia, and blond Celts, Germans and Slavs roughly centered on the lines of the Rhine and the Danube. There are blonds in Asia Minor. And while you won't find any downright golden hair, you'll find plenty of brown hair and blue eyes among the Berbers of Northern Africa!

Why? Where did the blond races come from? Or how did they get that way? And so forth?

The suggestion has been made that they came originally from ancient Atlantis, about which we can't prove anything one way or the other. But it's an interesting speculation.

Myself, I like to toy with the fancy that the human races of the inner planets, (assuming men can exist on any planet but Earth), are of fundamentally different coloring, and that Earth in some pre-historic period was colonized from the other three (Mercury, negro: Venus, monogoloid: Mars, blond), mixtures of these in different pro-

portions having produced the present races of Earth through the course of ages. The beauty of such fancies is that if anybody presumes to laugh, you can always say, "Was you dere, Sharley?"

But anyhow, it was from such ideas, admittedly in rather jumbled state, that the first "color" of what a Dan Hanley might find on Mars began to form. Out of this grew the itch to write "Lilrin." So I wrote her.—Phil Nowlan, Bala-Cynwyd, Pa.

BERTRAND L. SHURTLEFF

Author of

NEW YORK FIGHTS the Termanites

BORN at the junction of Rhode Island, Massachusetts, and salt water, I was brought up in the shadow of New Bedford and the whaling industry. My mother's father was a mate on a whaler and his brother was a captain. My paternal grandfather was a circuit preacher in Wisconsin, leaving there to rally to the aid of John Brown in Kansas for the cause of abolition.

My father was born on circuit in a covered wagon. He punched cattle, laid ties over Ratoon Pass, and shoved westward over the Santa Fe trail to finally reach Frisco and ship around the Horn in an English brig for Liverpool. Then he engaged in coasting from New England to the West Indies for some years before settling down ashore.

Born with a whiff of salt water in my nostrils and quantities of the same in my veins, I never have missed an opportunity to hang around the wharves and ships. At thirteen years of age, weighing one sixty-five and standing the same fifteen that I do now, I was ready to ship for Barbados on a three-masted schooner carrying supplies to whalers fishing out of there and bringing back their oil, when an accident prevented me from sailing. After another year in school I shoved off on my own and have been self supporting ever since.

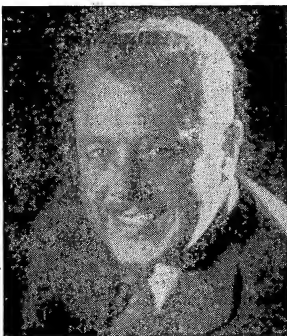
At eighteen I went back to school, attending East Greenwich Academy and preparing for Brown University in three years. Then the war came along, and I enlisted in the U.S.N.

R.F. as the only service promising release at the end of the war. Trained at Newport and sent to New London State Pier, I was busy fitting sub-chasing 75-footers with anti-sub and aircraft guns and listening devices, when I was shipped into Brown to study for a commission.

The Armistice left me there, and I stayed on, having played in every football game that year (they had no freshman rule at Brown then). I played three more seasons without missing a game, wrestled four years, was the first intercollegiate wrestling champ at Brown, and had some fun trying to throw the sixteen-pound hammer away.

Meanwhile I delved into everything that would pay a dollar to earn my way through, from structural steel work on tall buildings, to shipping before the mast on a fruit boat to Costa Rica.

Then teaching, coaching, professional football and wrestling, and a score of other jobs. But always with the intent of becoming a



PHIL NOWLAN

writer some day. A little book of original verse, largely of the sea, sold 2,000 copies in 1922-23. Then I settled down to my quota of 5,000 words per week minimum at fiction. Although much of the output has gone into the practice listing, my yarns have appeared in over thirty different magazines. I have had my first novel published in England within the last year, and a second is in galley proof awaiting correction and revision at this minute.

In addition I am teaching English at the East Providence High School and lecturing widely on the absurdities of professional wrestling and my experiences at attempting to break into the movies. I was considered a possibility to replace the late Louis Wolheim (which places my particular brand of heaviness) and rushed into a test, with an optional contract calling for \$50,000, for five years—but nobody signed the thing. Later I was urged to go to Hollywood and have been out twice, getting bit work the first time and writing scenarios the second trip.

My greatest gift is a curiosity to know all about it. I miss no opportunity to see and investigate. When I was in Pottsville with a pro football club I went into breaker house and coal mine—writing mining yarns as a result. When I visited Gloucester I had to chin with all the old fishermen I could find. At sea I pump officers, crew, and everybody else available, often spending my leisure hours with an engineer and getting to know something about the world in which he lives.

My interest in the Ziff-Davis books promises to be an active one. Jules Verne was one of my childhood companions and I have had some of my best work in the field of the weird invention. Incidentally the lure of only one thing surpasses that, the love of the south seas. I fairly hung over the rails all the way through the Bahamas and the West Indies on my first trip that way, dreaming of being marooned on a coconut studded isle—and the longing hasn't died yet.

I have a very fertile imagination and some editors think a knack for giving the illusion that I have been where I haven't. My biggest kick from that came some ten years ago when I sold a story about upper Burma to a now defunct book. The editor wrote, "I was up the river in 1905 but you must have gone up farther than I did. Won't you write and tell us when and just how far you went? Our readers would like to know." I had to confess I made my trip via the NATIONAL GEOGRAPHIC—Bertrand L. Shurtleff, New York, New York.

THORNTON AYRE

Author of

MYSTERY OF THE WHITE RAIDER

A scientific knowledge advances it is inevitable that the criminal will perfect his own scientific resistance to the probing of the law, but if, as seems the case, scientific justice must finally triumph, it will mean the reduction of crime to a very low percentage, the game simply not being worth the risk.

It is also possible, however, that with the almost total elimination of ordinary crime, there will come criminal activity of a type which will baffle even the earth's best scientific criminologists. Such a story is "Mystery of the White Raider," wherein I have imagined the Investigation Department of the future faced with a particularly strange sort of menace, and one which, given time and scientific achievement on this and other worlds, is perhaps not so outlandish as it at first appears.

In most of its main details this story follows out the fast action tradition of the modern detective story, the one essential difference being the locale and scientific basis for the mystery. That the police of the future will control particular sectors of a city simply by switchboards is not by any means improbable, particularly as radio, television, electric eyes, and so forth evolve to their full possibilities.

Some readers, I expect, will question the Jekyll and Hyde theory which the story uses. So what? Stevenson started it off—then Arthur B. Reeves transplanted it into modern setting very effectively. Here it is transplanted to 1990 but with, I hope, the one virtue that a creature like the Outcast might be logically able to do such things by reason of his planetary upbringing. The idea, in itself is not new, I admit, but the uses to which it is put definitely are.

Without giving the yarn away (because you may read this before the story) I am forced to stop right here.—Thornton Ayre, London, England.

30 Years with the U. S. Army SIGNAL CORPS

The Signal Corps of the United States Army offers qualified young men an opportunity to learn radio by practical, modern methods and at the same time receive pay, clothing, living quarters, medical attention, and retirement privileges. Follow a typical young American from the time he enlists until he retires . . . then judge for yourself whether or not our Army presents the most attractive radio proposition for those who are ambitious to advance. Don't fail to read this stimulating account of the U. S. A. Signal Corps, just one of the many brilliant features in the

JANUARY ISSUE

**RADIO
NEWS**

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Quiz Page

THE following quiz has been prepared as a pleasant means of testing your knowledge of things fantastic and scientific. We offer it solely for the pleasure it gives you, and with the hope that it will provide you with many bits of information that will help you to enjoy the stories in this magazine.

Here's the yardstick for measuring your mental capacity which is being tested by this quiz.

Count 1.5 points for each correct answer. If you get between 55 and 70 points, you won't have to take up nursery rhymes for intellectual enjoyment. 70 to 85 points merits you a slight pat on the back. 85 to 100 points, and you'd be a suitable companion for Isaac Newton. Get over a hundred points and we'll suspect you of cheating.

TRUE AND FALSE

This is old stuff so don't argue if you're wrong.

1. The fluoroscope detects Gamma and X-rays. **+**
2. The brain is part of the central nervous system. **+**
3. A stimulus never gives two different mental effects. **-**
4. The human eye is more sensitive than a camera. **-**
5. The autonomic nervous system does not control visceral portions of the body. **+**
6. The Behaviorists have no place in their theories for consciousness. **+**
7. It requires conscious volition to make an automatic reflex. **+**
8. The phlegmatic temperament denotes a person who is quick-acting and boisterous. **-**
9. There is more than one galaxy. **+**
10. One of Newton's laws states that for every action there is an equal and opposite reaction. **+**
11. Hormones regulate certain bodily activities. **+**
12. Symbiosis is a chemical process. **-**
13. Embryos from different animals show no similarity in structure or development. **-**
14. Kepler's laws are concerned with the movements of the planets. **+**
15. Dr. George Ellery Hale brought about the building of the 200 inch Mt. Palomar telescope. **+**
16. The cranial capacity of the Pitman man was only about two fifths that of the average man of today. **-**
17. Apes are incapable of devising simple instruments. **-**
18. Beriberi is caused by lack of Vitamin B. **+**
19. It is impossible to measure the temperature of stars. **-**
20. Dendrites are parts of a neurone. **+**

COMPLETE THE STATEMENT

Hint—only a genius could answer "a" for question 3.

1. The Yerkes Observatory is used: a. as a weather station; **b.** to study stars; c. to observe microorganisms; d. as a science motion picture theater.
2. The Doppler effect is used to detect and measure: a. heat; **b.** chemical composition; c. weight; d. motion.
3. Auto-intoxication means: a. deliberately making oneself drunk; **b.** the condition of helplessness when drugs are taken; c. poisoning by toxic matter generated in the body; d. a dietary disease.
4. A light-year approximates: a. 4 1/2 billion miles; **b.** six trillion miles; c. 22 million miles; d. 365 billion miles.
5. The galvanometer measures: **a.** current; b. anger; c. light; d. sound.

6. Estimates indicate that stars collide every **a.** quadrillion years; b. 10 seconds; 5 seconds; d. 97 years.

7. The eye can shift from one image to another every: a. 1/6 minute; **b.** 1/10 second; c. 1/3 minute; d. 1/200 hour.

8. A colorimeter is used to measure: a. calories; b. oscillations; **c.** colors; d. calcimine content.

9. The body which is not a star is: a. Arcturus; b. Vega; **c.** Mars; d. Betelgeuse.

10. Rhenium is: a. a formula; b. a compound; c. a process; **d.** an element.

FILL IN THE MISSING LETTER

This one is a cinch—there are only 26 letters in the alphabet. Fill in the missing letters.

- | | | | |
|--------|--------|--------|----------------|
| L | | L | |
| Ex. M | N | plus | "A" equals MAN |
| W | W | | |
| 1. T N | 2. R M | 3. S N | 4. E G |
| 5. A R | 6. C M | 7. A | E |
| 8. D | E | 9. E | D |
| 10. E | A | 11. E | A |
| 12. E | A | 13. E | A |
| 14. E | A | 15. E | A |

COMPLETION

Fill in the missing letters to form the name of an element. You should be able to do this one left handed.

1. A - - - - y 2. A - - - - c 3. Z - - - - m 4. H - - - - n 5. C - - - - r
6. G - - - - d 7. P - - - - s 8. T - - - - n 9. M - - - - e 10. K - - - - n
11. M - - - - y 12. I - - - - e 13. F - - - - e 14. B - - - - n
15. C - - - - t

TWO BY TWO

Rearrange the words in the second column so they will be closely associated with the corresponding words in the first column. The principle of association is easily explained. You wouldn't expect to witness a prize fight between Joe Louis and Albert Einstein, would you?

- | | |
|-----------------------|-----------------------------|
| 1. Dr. John B. Watson | 1. Electron |
| 2. Light waves | 2. Cretinism |
| 3. Thyroxin | 3. Mendel |
| 4. Eoliphus | 4. The North Star |
| 5. Protom | 5. Microbes |
| 6. Polars | 6. 186,000 miles per second |
| 7. Microscope | 7. Behaviorism |
| 8. Heredity | 8. Air pressure |
| 9. Barometer | 9. Response |
| 10. Stimulus | 10. Horse |

YES OR NO?

Does such a thing exist? Consider carefully before you say, "There ain't no such animal!"

1. Andromeda Spiral Nebula
2. Fraunhofer stars
3. Extragalactic nebula
4. A pyrheliometer
5. A spectroheliometer
6. A millimicro
7. A sphigmomanometer
8. The sun's ponomosphere
9. The "Appenine Mountains" on the moon
10. Palodymium

(Answers On Page 95)

READER'S PAGE

NO. 1 STORIES

Sirs:

You have really got something in that November issue. But you're bound to have something when you get Coblenz, Bond, Ayre, and Duclos together. What a combination! You have the best stories I've seen in s-f in a long time. All of the following are No. 1 stories: "Man from Hell," "Purple Conspiracy," "F.O.B. Venus," and "Into Another Dimension," "Lunar Intrigue" and "Pioneer—1957" would rank tops in most s-f publications.

If Mr. Fred Hurter of Red Rock, Ont., is not converted now, he is beyond conversion.

Your illustrations are extra good. With Paul on the back and Fuqua in front, and Krupa and Reeve within they're tops.

How about taming the size of FANTASTIC down to that of *Amazing*. It's just out of place with all my other s-f mags.

James Doherty,
206 Pine Street,
Newport, Arkansas.

Glad to see you like us so well. We'll try to keep these authors turning out topnotch stuff, and we won't buy anything that isn't. I think Fred IS converted. Maybe he'll write us and admit it. He's really our very good friend, and we might suggest that some of you fans write him—because he's laid up. His address is Red Rock, Nipigon P. O., Ontario, Can. Reduce FA in size? Get ready to duck our other readers!—Ed.

SUGGESTIONS

Sirs:

I have been reading FANTASTIC ever since it came out and it is the best sf. mag I have ever seen.

In your readers column, you had a letter from J. S. Avery, who suggested the Man From Earth cover. Very good. But don't worry about running out of places to cover. After you have given us the people from all the nine solar planets, you still have the 28 satellites of those nine planets. Then there are Sirius, Vega and a lot of other stars that may have systems.

Now for one idea I have been holding.

A foreign army attacks the U. S. The Yank soldiers appear on the field with strange earmuffs on, holding violins! They play a few high notes and the enemy goes crazy. Why not? I have heard that a violinist can shatter a steel bridge with high vibrations. At least, if the army doesn't take this one, it will make a good sf. plot.

Jerry Culick,
74 Locust Avenue,
Amsterdam, N. Y.

Thanks for the suggestions. We respect your plot idea is a bit of ribbing, eh what? Well, maybe some author will fool you and write a good yarn around it!—Ed.

CHEERS FOR POLTON CROSS

Sirs:

What is beyond the great divide? Surely that is a question that everyone is, of necessity, interested in. Mr. Polton Cross, in his story "The Man From Hell," in the November issue of FANTASTIC ADVENTURES, has a quite lucid theory.

"The Man From Hell," besides being a fast moving story, packed with action and drama, deals with another subject that is of universal interest.

Scientists all over the world have been experimenting with atomic force. Who knows—perhaps in our life time the dream of govern-

ing atomic power will be realized.

Mr. Cross has dealt with these subjects in a quite interesting manner, and, for having done so, gets the nod from this empire for having the best and most interesting story of the issue.

Claude W. Williford.

We're afraid your interesting question will never be answered—for the living. And we don't anticipate any "Men from Hell" coming back in fact, even if Mr. Cross did it in very convincing fiction.—Ed.

CHEWED HIS FINGERNAILS

Sirs:

I believe "Into Another Dimension" should be first on your list. It has everything in it that the name of your magazine implies. To begin with, it's indeed fantastic—but not enough to be laughingly absurd like some of the other stories I've read.

As for the adventure part of it, well, I chewed off three finger nails by the time I finished the story—and I don't usually chew my finger nails! There is only one thing wrong with the story—it should have been longer.

Melvin McFarland,
E. Slauson Ave.,
Maywood, Calif.

TWO QUALITIES COMBINED

Sirs:

I've read science fiction for a length of about five years. But my pleasure of reading was not only limited to science fiction, I enjoyed reading any adventure novel that came my way. Now, a magazine like FANTASTIC ADVENTURES has to prove to me that these two qualities can be combined into one ultimate type of tale that certainly hits the spot. What else could be nearer to perfection than a story like "Golden Girl of Kalendar" that compromises: science, adventure, new development, new characters and a novel, unique plot that makes it breathe with the essence of truly great material.

Chester Woodrow,
183 Indiana Avenue,
Shenandoah, Pa.

"PLUNGING"

Sirs:

Voting "Horror Out of Carthage" by Edmond Hamilton the best story of the September issue. I seem to violate all my preconceived standards of an excellent science-fiction story. The idea, the theme, of the story is old. The characters are not exceptionally well drawn. The plot has been done many times before. If all this is so, what is it, then, that makes the story the best of the issue?

In the first place the setting of the story in time and place is well calculated to arouse that fantastic spark in all of us, and plunges us deeply into the old plot in a new scene. This matter of "plunging" is one that gives every story its true worth. Ask yourself, "Have I lived this?" If the answer is "yes," you will know at once that the story was good.

It all boils down to the simple fact that "Horror Out of Carthage" was convincing, full of atmosphere and suspense, and—most important—very *plungent*.

Donn Brazier,
3031 N. 36 Street,
Milwaukee, Wis.

SHE'S COMING BACK...



THE GOLDEN GIRL OF KALENDAR by Orlin Tremain

The cupola of the palace seemed to hang above the square of Okka, though it was five miles away. It looked like the calyx of a great white flower—with white flame for petals. In the midst of it stood, like a priestess out of some olden time, when the world was very young, and gods mingled with men, Jalu, the Golden One, her arms uplifted, her face raised as though she prayed.

Angel Gabriel, Kalen thought, must look as Jalu's image looked at this moment. So distinct, in the midst of the glare, was Jalu, that Kalen could see every gorgeous curve of her, the lithe perfection of her limbs, the glory of her golden hair. . . . It was black magic!

Her voice cut through the sounds the beasts made, attacking Okka, even over the sounds of battle.

"Hear me, Sire! If you capitulate to the rebels, I shall cast myself down from this high place, into the heart of the flames! I would rather die than that Kalendar be less than what we both desire!"

Kalen, his face a mask of grim composure, turned to Orkus.

"You heard? Set the tractors in motion . . ."

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**DON'T FAIL TO READ THIS
THRILLING STORY IN THE
MARCH ISSUE**



ON SALE JANUARY 20

WANTS JOHN CARTER

Sirs:

I am a boy fourteen years old. This is the first time I have written to a magazine.

I wish you'd get your magazine out monthly instead of two months.

Tell "Paul" I would like to see what kind of life they have on Pluto, or Neptune.

Bobby Kurth,
403 Montooth Ave.,
Lupkin Texas.

P. S. Keep Edgar R. Burroughs. Ask him to write about John Carter.

Welcome to our ranks, Bobby. As you can see, we are monthly now, so your request is answered. And our back cover this month shows Life On Pluto, another request answered. Neptune is coming. And maybe Edgar Rice Burroughs will give us a John Carter story before very long.—Ed.

F.A. ABROAD

Sirs:

Being a very interested reader of Science Fiction, but living in England where I can only purchase a book occasionally, I would like to know if you could tell me how I could get a regular copy of your FANTASTIC ADVENTURES. I have just got the first copy dated May, 1939, and the date is now August 3rd. I haven't read the book yet, but judging from a quick glance it is the best addition to Science Fiction for years. I was in Canada 10 years ago, and while there I first read Science Fiction and have been a glutton for it ever since.

S. A. Brackley,
38 Letchworth Ave.,
Feltham, Middlesex, England.

The best way to insure receiving FANTASTIC ADVENTURES each month is to subscribe. The price for a foreign subscription is \$3.40 for twelve issues (one year) or \$1.70 for six issues. Due to the recent changes caused by the war, copies sent abroad are rare. We believe this is the only way you can insure delivery of each copy, although there may be some natural delay. We give this information for the benefit of our many foreign readers.—Ed.

ROCKET SHIP AT THE WORLD'S FAIR

Sirs:

I went to the World's Fair one day and walked myself into a 4th dimensional trance trying to see everything in the 12 hours I was on the fair grounds.

The exhibit I wish to criticize was the interplanetary rocket exhibit in the Chrysler Pavilion. It was set off in a special room under auspices of the American Interplanetary Society.

It was designed by Raymond Lowry and it is a beautiful thing—this rocket gun affair—a model of course. Looked like H. G. Wells' "Things to Come" picture.

Rows of seats were around the gadget and every fifteen minutes the show

would occur. First, motion pictures of the history of transportation and then very; very briefly the commentator, (screen voice, I guess) mentioned rocketing. Then a whirling of seemingly ponderous machinery and the rocket moved to the gun. Then a bang, smoke, and a ray of light from gun muzzle toward ceiling to give the illusion of a rocket zipping toward space. Very effective and pretty.

But I was very disappointed and other visitors scoffed. Isn't this Interplanetary society aware of inertia flattening people inside the rocket? This is child stuff. That's the layman's conception of rocket travel for people—shot from a gun. From zero to 3600 m.p.h. in a split second.

Do you suppose the model was planned just to give people a show of bang, flash, smoke? Just sensational, it appeared to me.

The theme of the fair was The World of Tomorrow and all other exhibits of the futuristic theme seemed plausible and practical, but this human cannonball stuff in American Interplanetary Society Bldg. . . .

Ralph Newman,
500 Maywood Ave.,
Maywood, N. J.

Your description is interesting, and we can understand your impression. Many science fiction fans got the same reaction. Maybe in a future fair we'll have something to say about such an exhibit. Certainly, the exhibit should have been graced with the advice of a competent rocket authority. The facts could have been more interesting than the fiction that is presented.—Ed.

ELEMENTS OF A GOOD STORY

Sirs:

While vacationing in Havana I picked the September issue of FANTASTIC ADVENTURES from the newsstand collection.

I believe every reader has a certain criterion by which he judges a story. Well here is my list which I expect a good story to live up to. It must have

1. Human interest.
2. Adventure and Fantasy.
3. Literary style.
4. Well-constructed plot.

To my mind F. Orlin Tremaine's "Golden Girl of Kalendar" comes closest to fulfilling all of these requirements. I particularly enjoyed its smooth easy reading style. It has a well-defined, logical plot and moves along smoothly and logically to a satisfactory conclusion.

Many stories of this type suffer from poorly thought-out conversation. I like my characters to talk logically. No author should try to bolster up his plot through explanations in conversation. Tremaine's characters talk good everyday English, common-sense English.

Again I give you Tremaine's "Golden Girl of Kalendar." Orchids to him for a fine story!

Ada H. Diaz,
1348 Whitney Avenue,
Niagara Falls, N. Y.

KIDNEY TROUBLE

Stop Getting Up Nights

To harmlessly flush poisons and acid from kidneys and relieve irritation of bladder so that you can stop "getting up nights"—get a 35 cent package of Gold Medal Huxham Oil Capsules and take as directed. Other symptoms of kidney and bladder weaknesses may be scant, burning or smarting passage—backache—leg cramps—puffy eyes. Get the original GOLD MEDAL. Don't accept a substitute.

GUARANTEED TIRES! GOODYEAR-GOODRICH FIRESTONE U.S. and Other Standard Makes

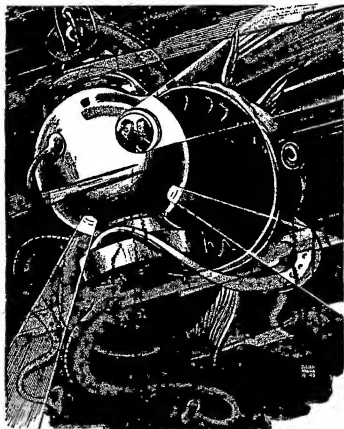
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36x34	10.00	12.00	1.00	1.00	1.00
38x34	10.00	12.00	1.00	1.00	1.00
40x34	10.00	12.00	1.00	1.00	1.00
42x34	10.00	12.00	1.00	1.00	1.00
44x34	10.00	12.00	1.00	1.00	1.00
46x34	10.00	12.00	1.00	1.00	1.00
48x34	10.00	12.00	1.00	1.00	1.00
50x34	10.00	12.00	1.00	1.00	1.00
52x34	10.00	12.00	1.00	1.00	1.00
54x34	10.00	12.00	1.00	1.00	1.00
56x34	10.00	12.00	1.00	1.00	1.00
58x34	10.00	12.00	1.00	1.00	1.00
60x34	10.00	12.00	1.00	1.00	1.00
62x34	10.00	12.00	1.00	1.00	1.00
64x34	10.00	12.00	1.00	1.00	1.00
66x34	10.00	12.00	1.00	1.00	1.00
68x34	10.00	12.00	1.00	1.00	1.00
70x34	10.00	12.00	1.00	1.00	1.00
72x34	10.00	12.00	1.00	1.00	1.00
74x34	10.00	12.00	1.00	1.00	1.00
76x34	10.00	12.00	1.00	1.00	1.00
78x34	10.00	12.00	1.00	1.00	1.00
80x34	10.00	12.00	1.00	1.00	1.00
82x34	10.00	12.00	1.00	1.00	1.00
84x34	10.00	12.00	1.00	1.00	1.00
86x34	10.00	12.00	1.00	1.00	1.00
88x34	10.00	12.00	1.00	1.00	1.00
90x34	10.00	12.00	1.00	1.00	1.00
92x34	10.00	12.00	1.00	1.00	1.00
94x34	10.00	12.00	1.00	1.00	1.00
96x34	10.00	12.00	1.00	1.00	1.00
98x34	10.00	12.00	1.00	1.00	1.00
100x34	10.00	12.00	1.00	1.00	1.00
102x34	10.00	12.00	1.00	1.00	1.00
104x34	10.00	12.00	1.00	1.00	1.00
106x34	10.00	12.00	1.00	1.00	1.00
108x34	10.00	12.00	1.00	1.00	1.00
110x34	10.00	12.00	1.00	1.00	1.00
112x34	10.00	12.00	1.00	1.00	1.00
114x34	10.00	12.00	1.00	1.00	1.00
116x34	10.00	12.00	1.00	1.00	1.00
118x34	10.00	12.00	1.00	1.00	1.00
120x34	10.00	12.00	1.00	1.00	1.00
122x34	10.00	12.00	1.00	1.00	1.00
124x34	10.00	12.00	1.00	1.00	1.00
126x34	10.00	12.00	1.00	1.00	1.00
128x34	10.00	12.00	1.00	1.00	1.00
130x34	10.00	12.00	1.00	1.00	1.00
132x34	10.00	12.00	1.00	1.00	1.00
134x34	10.00	12.00	1.00	1.00	1.00
136x34	10.00	12.00	1.00	1.00	1.00
138x34	10.00	12.00	1.00	1.00	1.00
140x34	10.00	12.00	1.00	1.00	1.00
142x34	10.00	12.00	1.00	1.00	1.00
144x34	10.00	12.00	1.00	1.00	1.00
146x34	10.00	12.00	1.00	1.00	1.00
148x34	10.00	12.00	1.00	1.00	1.00
150x34	10.00	12.00	1.00	1.00	1.00
152x34	10.00	12.00	1.00	1.00	1.00
154x34	10.00	12.00	1.00	1.00	1.00
156x34	10.00	12.00	1.00	1.00	1.00
158x34	10.00	12.00	1.00	1.00	1.00
160x34	10.00	12.00	1.00	1.00	1.00
162x34	10.00	12.00	1.00	1.00	1.00
164x34	10.00	12.00	1.00	1.00	1.00
166x34	10.00	12.00	1.00	1.00	1.00
168x34	10.00	12.00	1.00	1.00	1.00
170x34	10.00	12.00	1.00	1.00	1.00
172x34	10.00	12.00	1.00	1.00	1.00
174x34	10.00	12.00	1.00	1.00	1.00
176x34	10.00	12.00	1.00	1.00	1.00
178x34	10.00	12.00	1.00	1.00	1.00
180x34	10.00	12.00	1.00	1.00	1.00
182x34	10.00	12.00	1.00	1.00	1.00
184x34	10.00	12.00	1.00	1.00	1.00
186x34	10.00	12.00	1.00	1.00	1.00
188x34	10.00	12.00	1.00	1.00	1.00
190x34	10.00	12.00	1.00	1.00	1.00
192x34	10.00	12.00	1.00	1.00	1.00
194x34	10.00	12.00	1.00	1.00	1.00
196x34	10.00	12.00	1.00	1.00	1.00
198x34	10.00	12.00	1.00	1.00	1.00
200x34	10.00	12.00	1.00	1.00	1.00
202x34	10.00	12.00	1.00	1.00	1.00
204x34	10.00	12.00	1.00	1.00	1.00
206x34	10.00	12.00	1.00	1.00	1.00
208x34	10.00	12.00	1.00	1.00	1.00
210x34	10.00	12.00	1.00	1.00	1.00
212x34	10.00	12.00	1.00	1.00	1.00
214x34	10.00	12.00	1.00	1.00	1.00
216x34	10.00	12.00	1.00	1.00	1.00
218x34	10.00	12.00	1.00	1.00	1.00
220x34	10.00	12.00	1.00	1.00	1.00
222x34	10.00	12.00	1.00	1.00	1.00
224x34	10.00	12.00	1.00	1.00	1.00
226x34	10.00	12.00	1.00	1.00	1.00
228x34	10.00	12.00	1.00	1.00	1.00
230x34	10.00	12.00	1.00	1.00	1.00
232x34	10.00	12.00	1.00	1.00	1.00
234x34	10.00	12.00	1.00	1.00	1.00
236x34	10.00	12.00	1.00	1.00	1.00
238x34	10.00	12.00	1.00	1.00	1.00
240x34	10.00	12.00	1.00	1.00	1.00
242x34	10.00	12.00	1.00	1.00	1.00
244x34	10.00	12.00	1.00	1.00	1.00
246x34	10.00	12.00	1.00	1.00	1.00
248x34	10.00	12.00	1.00	1.00	1.00
250x34	10.00	12.00	1.00	1.00	1.00
252x34	10.00	12.00	1.00	1.00	1.00
254x34	10.00	12.00	1.00	1.00	1.00
256x34	10.00	12.00	1.00	1.00	1.00
258x34	10.00	12.00	1.00	1.00	1.00
260x34	10.00	12.00	1.00	1.00	1.00
262x34	10.00	12.00	1.00	1.00	1.00
264x34	10.00	12.00	1.00	1.00	1.00
266x34	10.00	12.00	1.00	1.00	1.00
268x34	10.00	12.00	1.00	1.00	1.00
270x34	10.00	12.00	1.00	1.00	1.00
272x34	10.00	12.00	1.00	1.00	1.00
274x34	10.00	12.00	1.00	1.00	1.00
276x34	10.00	12.00	1.00	1.00	1.00
278x34	10.00	12.00	1.00	1.00	1.00
280x34	10.00	12.00	1.00	1.00	1.00
282x34	10.00	12.00	1.00	1.00	1.00
284x34	10.00	12.00	1.00	1.00	1.00
286x34	10.00	12.00	1.00	1.00	1.00
288x34	10.00	12.00	1.00	1.00	1.00
290x34	10.00	12.00	1.00	1.00	1.00
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UNDERSEA PRISONER



By Harl Vincent

Four discs of weird luminosity swam into view . . . four ghastly orbs grew steadily larger and larger . . . and then appeared an ugly, squirmy monster, a giant octopus rearing its hideous body on three of its sucker-lined arms while the other five arms were weaving and twining toward the dangling sphere! Two eyes were beneath, two above a cavernous, wide-open mouth that was lined with row upon row of glistening incisors! The terrifying creature advanced . . . the car swung crazily in toward that yawning mouth. . . ! "God!" screamed Augustine. "It's going to swallow us!"

Sealed in a shell . . . over 15,000 feet under the ocean . . . a giant squid about to swallow them whole . . . were these two enemy scientists doomed to die this horrible death? Don't fail to read **UNDERSEA PRISONER** . . . an exciting story brimming with thrilling adventure and uncanny science!

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STORIES**

THREE IDEAS

Sirs:

There's an old saying that a story is not a story if it hasn't got an idea behind it. Therefore, a story with a good idea behind it is considered an acceptable story. But imagine a story with three swell ideas behind it, each one good enough for a book-length novel! 1. Return from the Dead." 2. "The Danger of Atomic Force." 3. "Salvation of the World." A title like, "The Man from Hell," and an author like Polton Cross. What a combination! There you have my reason for selecting this as the best story of the issue.

Harold Topf,
2877 Brighton 3 St.,
Brooklyn, New York.

TOUGH ON MANKIND

Sirs:

The November issue is the best one so far. Its stories are, for the most part, uniformly good, and every one adheres to the policy of fantastic adventure. "The Man from Hell" is easily the best of the issue even though it is not the best you have yet published. The theory of mitogenesis is real science fiction and the effect of atomic power on a war-hungry world is well portrayed. Also, I am glad to note that more stories are ending true to life, wherein the hero doesn't get his sweetheart-heroine.

Just a few words of criticism, though, about the two last stories. "Lunar Intrigue" was merely a gangster action story taking place on the moon, and what was the point to "The Purple Conspiracy"? It only brought forth that man will eventually exterminate himself by war if given the chance, as every one knows.

The cover painting is the best Fuqua has done yet, and that is indeed high praise for it. I especially liked Reeve's illustration on page 42 for "Into Another Dimension." Of course I can readily see why you would present the back cover as you did. But surely you don't mean it seriously for framing. I hope that you will present some real art work that will add to the beauty of a room. McCauley ought to be good at that, he uses a nice play of colors.

George P. Calvert,
335½ Woodland Avenue,
Williamsport, Pa.

Your comments are interesting, and you've struck the general note when you say like the ending of Polton Cross' story, "The Man from Hell." It is a refreshing relief when a story doesn't end in the conventional way. However, we won't hand you a flock of unhappy endings just because of this. If a story doesn't demand such an ending, we won't give it.

As for whether or not man would exterminate himself (as everyone knows) we don't like to agree there. Why doesn't some author write a story in which man is painted as having a little common sense, at least. Is man really such a sap?

Thanks for your comment on the cover. We know Fuqua has a high degree of ability, and you'll find his cover on this issue another example of a well-done job.

As for back covers, our readers like to collect them, and we try to present all our covers, wherever possible, in such form that this can be done. We aren't presenting them as an example of artistic excellence, to be hung as an ornament. These are fantastic subjects of interest to the fans, and they intend them, no doubt to grace the bookcases of dens and private sanctuaries.—Ed.

POLITICS VERSUS SCIENCE

Sirs:

First place in the November Issue goes, in my opinion, to Polton Cross' story "The Man from Hell." It is a very good imaginative tale, slightly off the usual type of science-fiction stories (I mean, leaning a bit toward fantasy, but not much) but still convincingly written.

The important point is, I think, that this story (just as "Pioneer—1957" which I selected for second place) proves that the present-day political set-up practically excludes a good number of possible scientific discoveries. It makes one wish that certain scientific discoveries—especially that of releasing the energy of the atoms—may be delayed by a kindly fate until humanity is ready for them.

Willy Ley,
35-33 29th Street,
Long Island City, N. Y.

We can easily see why you select these two stories. Your own reputation as a scientific expert, especially in rocketry is well known, and we feel pleased to note that you haven't punched a lot of holes in "Pioneer—1957", since we selected that yarn because of its accurate science, as well as for its down-to-earth human element. And we might agree about your wish concerning release of atomic power. They could be terrible discoveries, certainly, for an unprepared world.—Ed.

LIKES COVERS

Sirs:

Your recent covers have been a revelation! Each one has improved until I hardly believe you can keep up the good work. Now, if the January cover shows an equal advance, I'll begin to doubt if there ever will be an end to your progress in this line.

I think Robert Fuqua is your best all-round illustrator. His color is excellent. His draftsman's eye is perfect. And he has a convincing action touch. The figures seem real, at least to me.

McCauley has a lot of stuff too, but seems to lack the artistic abandon that characterizes Fuqua's work. His covers seem to be "posed" if you get what I mean. They don't impress one as being a "scene" from the story.

Allen Wentworth,
2354 Allenton Ave.,
Pittsburgh, Penna.

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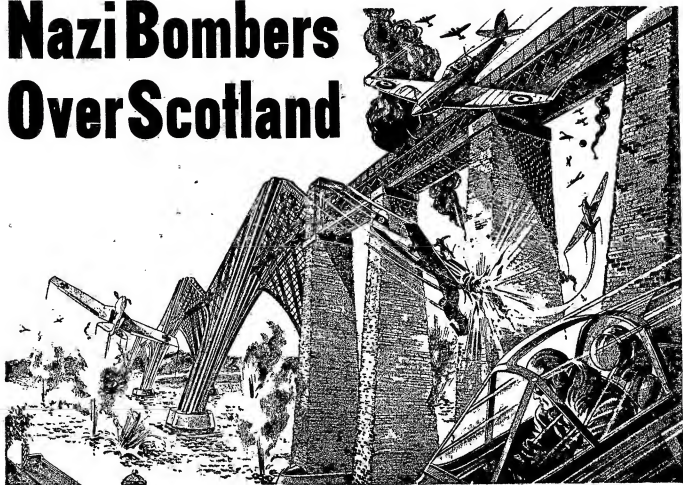
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Nazi Bombers Over Scotland



Swiftly the Nazi bomber roared toward its objective, the Spitfire in close pursuit! Whitley Trail dove grimly down . . . his motor thundering a promise of death to the bomber! In a moment the great bridge below would be blown to bits, unless Trail stopped the Nazi ratter! Down . . . down . . . down, like a flashing comet . . . then Whitley Trail sobbed, broke, whirled the plane viciously away. Before his eyes loomed the upthrust pylons of the bridge. Pylons! Always pylons! Trail couldn't stand pylons. They made him remember something . . . something that threw utter terror into his soul! An unreasoning, restless, terror that made a coward of him. Dimly through his fear-clouded brain he heard the roar of exploding bombs. The Nazi bomber had reached his objective! And he, Whitley Trail, could have prevented it. Why hadn't he? Why did he go into a blue funk at the mere sight of the pylons? Don't fail to read the answer in

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Warren S. Colwell,
3467 N. 44th Street,
Milwaukee, Wisconsin.

You are absolutely right about the kind of story that was termed "classic." We've heard this from many readers. And close study reveals the truth of it.

*One other factor your editor would like to point out is that those old "classics" lacked some of the "plot" value of the stories now appearing in **FANTASTIC ADVENTURES**. "The Moon Pool," for instance, was almost strictly adventure,*

CORRESPONDENCE CORNER

Angus Taylor, 6, Rothley Grove, Seaton Delaval, Northumberland, England wants to correspond with a girl of her own age, 16, anywhere in the U.S.A., who is interested in drawing and sports. . . . Stella Kowalek, 115-44-149 St. South Ozone Park, N. Y. wants pen pals, and is interested in everything. . . . Allen Glasser, 1645 Grand Concourse, N. Y. C. wishes to sell complete set of The Time Traveller, first SF fan magazine. . . . Max Belz, Waldoboro, Me. wants to correspond with fair to good chess players, anywhere, gives first move, price of game won 12 Scientifications. . . . Julian Unger, 139-50 St., Brooklyn, N. Y. has 8"x10" photographs of the World's first Scientification Convention Hall offered for 35c each; beautiful print suitable for framing. . . . Sol Knegov, 1171 Nelson Ave., Bronx, N. Y. would like to hear from people interested in selling their books, not magazines, which are in excellent condition, on such topics as SF, classics, politics, and books by famous authors. . . . C. Carlson, 2290 Bourbon St., Muskegon, Mich. wants correspondents of either sex, on any subject. . . . Langley Searies, 19 E. 235 St., N. Y. C. would like to obtain copies of back number magazines. Contact him, please. . . . Richard Kraft, 670 West End Ave., N. Y. C. wants pen pals interested in writing as a career, 17 yrs. old, but will welcome letters of people of any age. . . . Joyce Daugh, Box 2, Liverpool, Nova Scotia, Can. wants male and female correspondents from 20 to 40 yrs. of age, and would like to exchange stamps for magazines and books. . . .

QUIZ PAGE ANSWERS

(Quiz on Page 88)

TRUE AND FALSE

1. True; 2. True; 3. False; 4. False; 5. False; 6. True; 7. False; 8. False; 9. True; 10. True; 11. True; 12. True; 13. False; 14. True; 15. True; 16. False; 17. False; 18. True; 19. False; 20. True.

COMPLETE THE STATEMENT

1. b; 2. d; 3. c; 4. b; 5. a; 6. a; 7. b; 8. c; 9. c; 10. d.

FILL IN THE MISSING LETTER

1. O; 2. A; 3. U; 4. R; 5. I; 6. A; 7. G; 8. Y; 9. R; 10. A.

COMPLETION

1. Antimony; 2. Arsenic; 3. Zirconium; 4. Hydrogen; 5. Copper; 6. Gold; 7. Phosphorous; 8. Tungsten of Tin; 9. Manganese; 10. Krypton; 11. Mercury; 12. Iodine; 13. Fluorine; 14. Boron; 15. Cobalt.

TWO BY TWO

1. -7; 2. -6; 3. -2; 4. -10; 5. -1; 6. -4; 7. -5; 8. -3; 9. -8; 10. -9.

YES OR NO?

1. Yes; 2. No; 3. Yes; 4. Yes; 5. No; 6. No; 7. Yes; 8. No; 9. Yes; 10. No.

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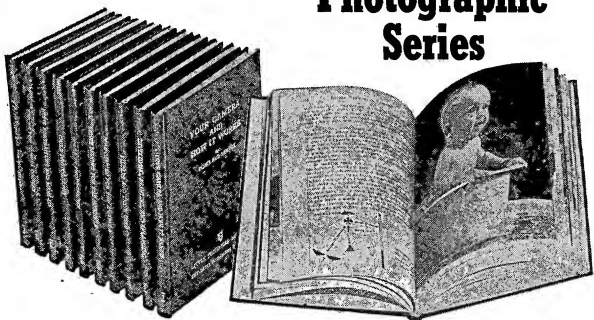
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CITY & STATE

• LIFE ON PLUTO •

By HENRY GADE

(See back cover painting by Frank R. Paul)

On our back cover this month we present the artist's conception of the inhabitants of the planet Pluto, deduced in imagination from scientific facts about that world as astronomers know them

OF ALL the worlds of the solar system, perhaps the strangest is Pluto. The outermost world of the system, the ninth planet, and last to be discovered, very little is really known of her that can be definitely put down on paper as fact. Some of the observations that have been made reveal the following:

Her distance from the earth is now forty-one astronomical units. Add that all up and the figure is 3,813,000,000 miles, which, although in interstellar space a puny distance, is a lot of miles for a planet to be from its parent.

Pluto's mass is now known to be smaller than at first believed, and scientists have tentatively placed it at about that of Earth. In many respects, the planet is like Earth. But only in mass, size, diameter, etc. Her distance from the sun makes her an utterly different world otherwise. Her orbit is elliptical, its plane inclined to that of the major planets at about 31 degrees, 21 minutes. The size of her orbit, is roughly, 433 astronomical units, or 433 times 93 million miles. We are referring to the long diameter here. The time required to travel around this tremendous orbit is staggering to imagine. It takes 3,200 years. Imagine a year 32 centuries long!

We will be able to view her through telescopes for only one hundred years more, when she will pass beyond sight, in empty space at the far end of her orbit. For 3000 years she will be gone, and then she will return.

All that time, it will be very cold, even colder than it is now, on Pluto. Her people will be forced to adopt more and more strenuous measures to remain alive until the centuries pass and the sun grows nearer once more. But even so, there is little heat from the sun. Below zero temperatures are the rule. The planet is undoubtedly a frozen world, and if any heat exists, it must come from an inner core, or from radioactive materials in its makeup.

Let us try to image the kind of people we might find on a world like Pluto.

First, we will assume that the world is very cold. And we will be safe in that. Also, we know that the world is a dark one, illuminated only by starlight. We say only starlight because the sun itself appears only as a bright star. Its distance is too great to appear as an appreciable disc.

Thus, we must have a creature capable of living in cold and dark. The dark infers a bat-like creature. The cold points to heavy fur. Thus, we have a winged people, capable of flitting about in the dark, crawling blindly over the ground with convenient claws, and protected against the cold by fur. Membrane wings will be impervious to cold.

The people of Pluto will not be large. Perhaps the tallest will be between three and four feet tall. They will be capable of swift travel on their wings, gliding from point to point, and climbing to high places to launch themselves in glides.

They will live mostly in caves, and natural habitats, since their appendages will not be sufficiently developed to enable them to construct any sort of dwelling. Whatever they do

build will be constructed of stone, or of metal.

It is possible that they will be a decadent race, a race already old and declining. Their world must be an old world, and perhaps the planet is covered by ancient ruins of greater races, incredibly long-dead. And yet, the perished people of a world that has covered the whole scale of a planet's evolution, might leave mechanical marvels still in working condition. Thus we might find the Plutonian bat-people still operating automatic wells that pump water from the planet's depths, and warmth-producing machines bringing heat from the planet's core.

But as each of these machines wears out, they will not be replaced. The Plutonians have lost the knowledge and the initiative to repair them. They are a dying race, near to death, perhaps so near that this is the last time their planet will go into outer space, to return with living beings.

The intelligence of the Plutonian may be high, but it is possible it may be idiotic, or mad. The ultimate result of over-development of the brain, and retrogression of the body, to combat an increasingly brutal environment.

The earthman, reaching this world, would need to wear a suit to protect him from extreme cold. He would need to carry oxygen. The air would be too thin for him to breathe. It would also intoxicate him, since there would be little else than oxygen. Hydrogen and nitrogen would be almost absent.

He would be unable to establish friendship with the Plutonian, who would attack him. It would be a mad attack, and perhaps fostered only by curiosity. A swoop down from above, then away again, to return, fluttering, squeaking, just as bats do in a barn when disturbed.

But the earthman would really have to fight for his life if he attempted to inspect the ancient machines. They are all that remain between the Plutonian and death, and he would protect them desperately. Life on Pluto is a hard, cruel thing, and the only source of water and heat would be the object of all Plutonians' constant defense.

The Plutonian would eat tiny rodents, arctic-like mosses, and might even digest certain types of earths.

The bat-people would be an extremely clannish tribe. They would remain together in closely knit groups, as a flock or swarm. They would huddle together during sleep periods for mutual warmth.

The extreme economy made necessary by their precarious existence would make such a thing as burial of the dead an unknown thing. Any member of the race who died, would be perfectly preserved by the cold, and would be eaten by his companions, perhaps after a process of dehydration and preservation. No Plutonian would have a big appetite, but would be capable of subsisting on very small amounts of food each day.

All in all, the Plutonian would be an unhappy creature, facing an early extinction, and living only by grace of an adaptive nature, and a long dead civilization. The future of Pluto can only be death and barrenness.

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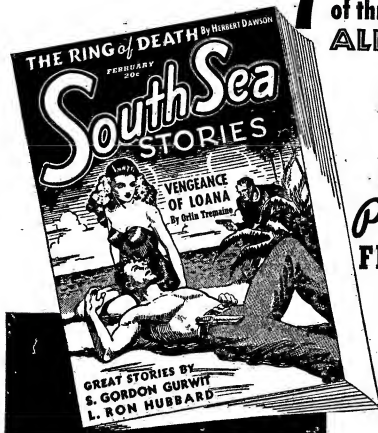
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LIFE ON PLUTO

This world of cold and eternal twilight would most likely be inhabited by winged bat-people with heavy protecting fur. Details on page 97

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